

INSTRUCTION MANUAL

DCS-100A

DYNAMIC DATA RECORDING SOFTWARE

[FOR COMMON OPERATION]

Thank you for purchasing KYOWA's product DCS-100A Dynamic Data Recording Software.

Read this Instruction Manual carefully in order to make full use of the high performance capabilities of the product.

Do not use the product in methods other than described in this Manual.

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NOTATIONS USED IN THE INSTRUCTION MANUAL

Certain notations are used as necessary to attract your attention to information that requires special care when handling the product, and to information provided for reference purposes.

Examples of Notations

NOTE

Essential precautions required when handling the DCS-100A.

MEMO

Reference items required when handling the DCS-100A.

IMPORTANT PRECAUTIONS WHEN USING DCS-100A

●For PC settings

Do not set your PC to the following state. Or, the DCS-100A may not properly operate.

- Screen saver is set to activate.
- Power consumption function including System standby is set to activate.
- Application software such as virus check software, etc. is set to activate on the way.
- PC is receiving access from the network. Or the PC is accessing to the network.

●For Windows font size

Select the font size "Normal (small)".

- Windows 8/8.1

Right-click the desktop and click **Personalize** on the pop-up-menu.

Select the "Smaller" on the Display window. Click the **Apply** button.

1. Outline

The DCS-100A is a Dynamic Data Recording Software that, by controlling Kyowa's dynamic measuring instrument, is designed to record data.

This Instruction Manual describes various common operations such as operations of real-time monitor windows (time series graph, X-Y graph, bar graph, numeric monitor, circular meter, bar meter, etc.), data reproducing windows, etc.

NOTE

Windows on the instruction manual are for the EDX-200A.

Items on windows vary with the measuring instrument.

1-1 Control target

The DCS-100A is capable of controlling the Kyowa's measuring instrument.

For how to control the measuring instrument, see "DCS-100A INSTRUCTION MANUAL (FOR *** OPERATION)."

For the measuring instrument, see separate volume of "*** INSTRUCTION MANUAL (FOR HARDWARE)."

Measuring instrument	Instruction manual
EDX-10A	[FOR EDX-10A OPERATION]
EDX-100A	[FOR EDX-100A OPERATION]
EDX-200A	[FOR EDX-200A OPERATION]
EDX-3000A/B	[FOR EDX-3000A/B OPERATION]
EDX-5000A	[FOR EDX-5000A OPERATION]
EDS-400A	[FOR EDS-400A OPERATION]
UDAS-100A	[FOR UDAS-100A OPERATION]
UCAM-550A	[FOR UCAM-550A OPERATION]
NTB-500A	[FOR NTB-500A OPERATION]
PCD-300 series	[FOR PCD-300 SERIES OPERATION]
PCD-400A series	[FOR PCD-400A SERIES OPERATION]
CTRS-100A	[FOR CTRS-100A OPERATION]

1-2 System requirements

The system requirements of the DCS-100A are as follows.

OS	Windows 8.1, Windows10, Windows11 Japanese/English, 32-bit/64-bit version (Windows11 is 64-bit Only) For the 64-bit OS, WOW64 (Windows 32-bit On Windows 64-bit).	
CPU	Core i5 2GHz or more	
Memory	For 32-bit OS, 2 GB or more. For 64-bit OS, 4 GB or more.	
Interface	EDX-10A	USB2.0 (*)
	EDX-100A/200A	100Base-TX or more, USB2.0 (*)
	EDX-3000A/B	100Base-TX or more
	EDX-5000A	100Base-TX or more
	EDS-400A	100Base-TX or more
	UDAS-100A	100Base-TX or more
	UCAM-550A	100Base-TX or more
	NTB-500A	CAN
	PCD-300 series	USB2.0
	PCD-400A series	USB2.0 (*)
	CTRS-100A	100Base-TX or more, USB2.0 (*)
Display	Resolution: 1024 × 768 dots or more	

*USB3.0 is also available.

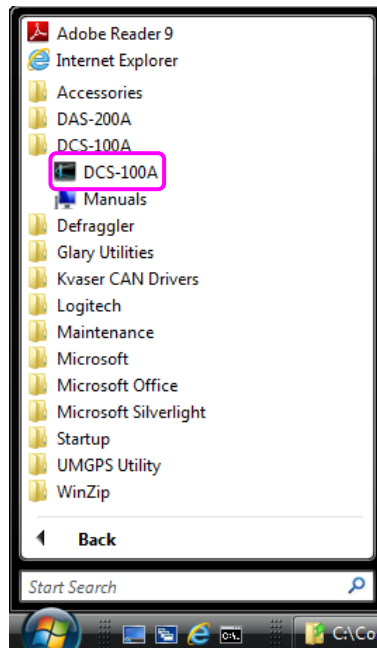
NOTE

- We (Kyowa) does not guarantee that the operation of the product will be uninterrupted or error-free.
When displaying multiple windows, an error may occur due to the PC performance. At that time, decrease the number of windows.
- The PCD-300 series is not Windows 8/8.1 compliant.
Do not connect the PCD-300 series to the USB 3.0 port. Or, the PCD-300 series will not operate properly.

1-3 To startup/Exit the DCS-100A

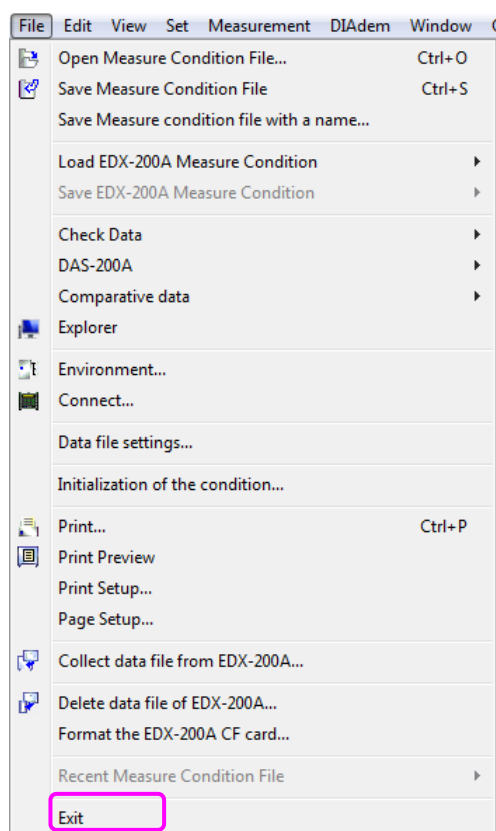
■ To startup the DCS-100A

Click the Windows Start menu - All Programs - DCS-100A folder - DCS-100A.



■ To exit the DCS-100A

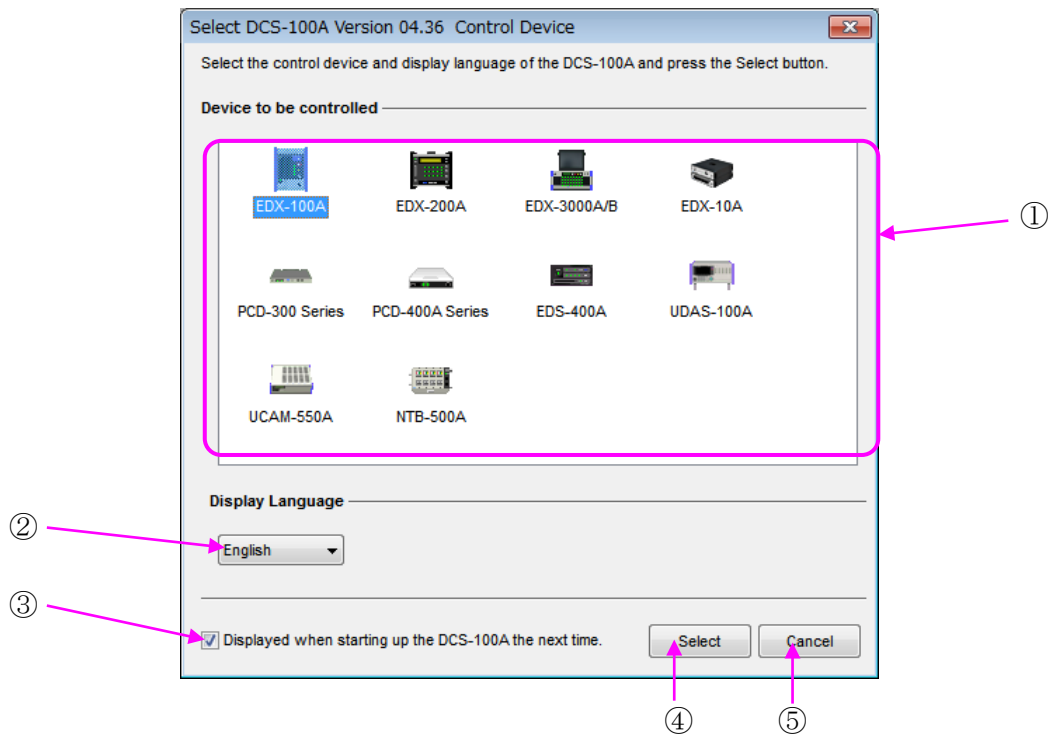
Click the File - Exit.



2. Basic operations

2-1 The device to be controlled window

Start up the DCS-100A. The Device to be controlled window appears.



① Device to be controlled

Select the target icon to be controlled on the DCS-100A.

“EDX-100A”, “EDX-200A”, “EDX-3000A/B”, “EDX-10A”, “PCD-300 Series”, “PCD-400A Series”, “EDS-400A”, “UDAS-100A”, “UCAM-550A”, “NTB-500A”

MEMO

To close the Device to be controlled window and to start up the MAIN window based on the current conditions, double-click the target icon.

② Display Language

Select the language of the application software.

English

③ Displayed when starting up the DCS-100A the next time.

To display the MAIN window without displaying the Device to be controlled window the next time, put a check mark to the check box next to the "Displayed when starting up the DCS-100A the next time."

④ **Select** button

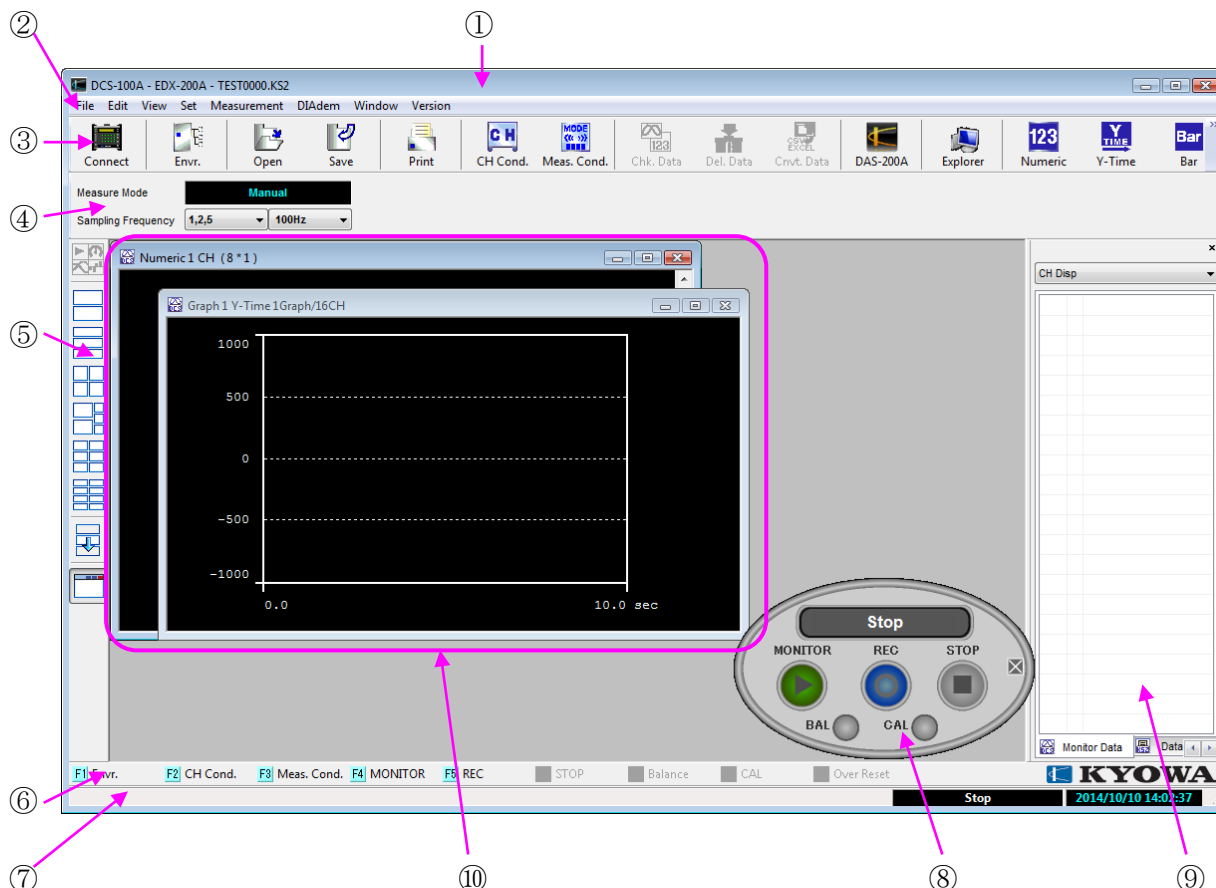
Closes the Device to be controlled window and starts up the MAIN window based on the current conditions.

⑤ **Cancel** button

Closes the Device to be controlled window and exits the DCS-100A.

2-2 Main window

Click the **Select** button on the Device to be controlled window to display the following MAIN window.



- | | |
|---------------------------------|--|
| ① Main Title Bar | Displays the DCS-100A model, current device to be controlled, data file name, and file title. |
| ② Menu Bar | Provides pull-down menu. |
| ③ Tool Bar | Displays the icon menu (tool bar button).
The icon menus (tool bar buttons) are able to be added, deleted, and sorted. |
| ④ Meas Mode Bar | Displays the current Meas Mode, Sampling frequency, The number of recording data, Recording time, etc. |
| ⑤ Window Disp Bar | Displays buttons to sort the Numeric windows/Graph windows and buttons to show/hide the title bar. |
| ⑥ Function Key Bar | Displays the icon menus (tool bar buttons), registered on the function keys (F1 to F12).
The icon menus (tool bar buttons) are able to be registered or deleted on the function keys (F1 to F12). |
| ⑦ Status Bar | Displays the measuring status, recording status, current time, etc. |
| ⑧ Measure Operation Panel | You can easily measure data by using buttons on the Measure Operation Panel with a feeling like using a remote controller. |
| ⑨ CH Disp Bar | Displays the current measuring channels and recording channels, while checking data.
Channels on the CH Disp Bar are able to be set on the Numeric windows/Graph windows by drag-and-drop operations. |
| ⑩ Numeric windows/Graph windows | Displays the monitor data and recorded data. |

2-2-1 Tool bar

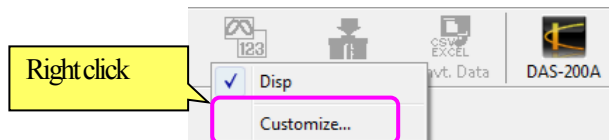
Displays the icon menu (tool bar button).

The icon menus (tool bar buttons) are able to be added, deleted, and sorted.

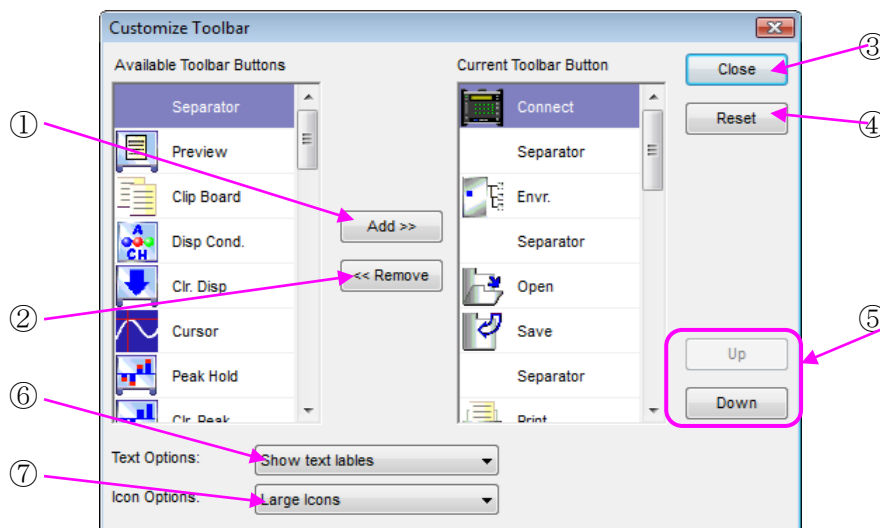


■ To add, delete, and sort the icon menus (tool bar buttons)

- (1) Open the Customize Toolbar window by any of the following.
 - Click the View - Control Bar - Tool Bar - Customize....
 - Right-click the Tool Bar and click the Customize... on the pop-up-menu.



- (2) The following window appears.



- | | |
|-----------------------------------|---|
| ① <u>A</u> dd button | Adds the current selecting icon menus (tool bar buttons) on the Tool Bar. |
| ② <u>R</u> emove button | Removes the current selecting icon menus (tool bar buttons) from the Tool Bar. |
| ③ <u>C</u> lose button | Determines the pre-set contents and closes the window. |
| ④ <u>R</u> eset button | Resets the icon menus (tool bar buttons) on the Tool Bar to the default status. |
| ⑤ <u>U</u> p/ <u>D</u> own button | Sorts the current selecting icon menus (tool bar buttons). |
| ⑥ <u>T</u> ext Options | Show or hide the the text labels on the icon menus (tool bar buttons).
Show text labels/Not show text labels |
| ⑦ <u>I</u> con Options | Size of the icon menus (tool bar buttons).
Small Icons/Large Icons |

- (3) Click the Add button/Delate button to display the icon menus (tool bar buttons) on the Tool Bar.

■ To show or hide the tool bar

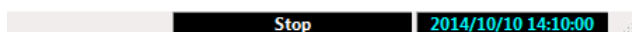
- (1) Operate the DCS-100A by any of the following.
 - Click the View - Control Bar - Tool Bar - Disp.
 - Right-click the Tool Bar and click the Disp on the pop-up-menu.
- (2) To show: Put a check mark to the check box next to the “Disp.”
To hide: Release a check mark from the check box next to the “Disp.”

MEMO

Icon menus (tool bar buttons) on the Tool Bar vary with the measuring instrument.

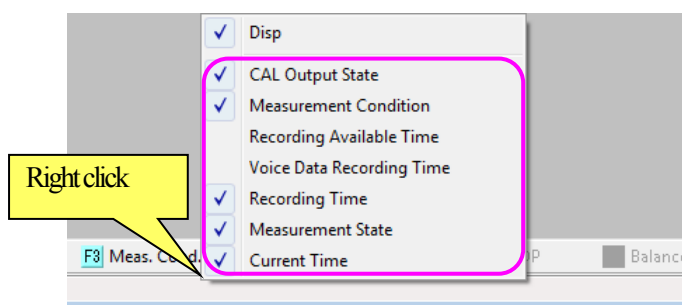
2-2-2 Status bar

Displays the measuring status, recording status, current time, etc.



■ To show or hide the items

- (1) Operate the DCS-100A by any of the following.
 - Click the View - Control Bar - Status Bar.
 - Right-click the Status Bar and click the target item on the pop-up-menu.



- (2) To show: Put a check mark to the check box next to the item.
To hide: Release a check mark from the check box next to the item.

MEMO

Items on the Status Bar vary with the measuring instrument.

■ To show or hide the status bar

- (1) Operate the DCS-100A by any of the following.
 - Click the View - Control Bar - Status Bar - Disp.
 - Right-click the Status Bar and click the Disp on the pop-up-menu.
- (2) To show: Put a check mark to the check box next to the “Disp.”
To hide: Release a check mark from the check box next to the “Disp.”

2-2-3 Meas mode bar

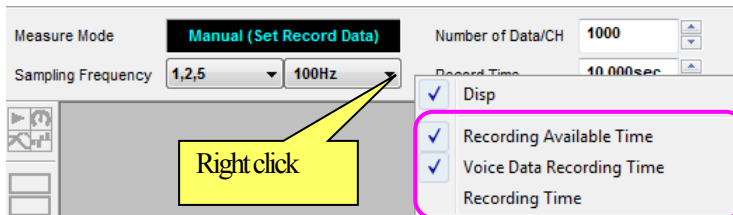
Displays the current Meas Mode, Sampling frequency, The number of recording data, Recording time, etc.

Measure Mode	Manual (Set Record Data)	Number of Data/CH	1000
Sampling Frequency	1,2,5 100Hz	Record Time	10.000sec

■ To show or hide the items

(1) Operate the DCS-100A by any of the following

- Click the View - Control Bar - Meas Mode Bar.
- Right-click the Meas Mode Bar and click the target item on the pop-up-menu.



- (2) To show: Put a check mark to the check box next to the item.
To hide: Release a check mark from the check box next to the item.

MEMO

Items on the Meas Mode Bar vary with the measuring instrument.

■ To show or hide the meas mode bar

(1) Operate the DCS-100A by any of the following

- Click the View - Control Bar - Meas Mode Bar - Disp.
- Right-click the Tool Bar and click the **Disp** on the pop-up-menu.

- (2) To show: Put a check mark to the check box next to the "Disp."
To hide: Release a check mark from the check box next to the "Disp."

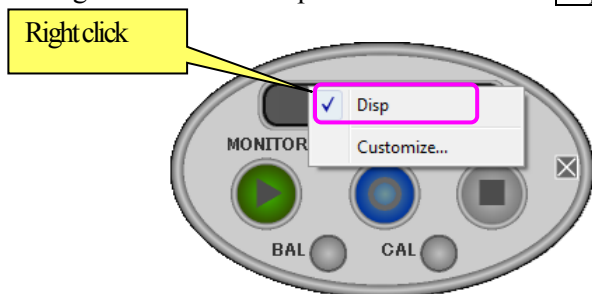
2-2-4 Measure operation panel

You can easily measure data by using buttons on the Measure Operation Panel with a feeling like using a remote controller.

■ To show or hide the measure operation panel

(1) Operate the DCS-100A by any of the following.

- Click the View - Control Bar - Measure Operation Panel - Disp.
- Right-click the Measure Operation Panel and click the **Disp** on the pop-up-menu.



- (2) To show: Put a check mark to the check box next to the “Disp.”
 To hide: Release a check mark from the check box next to the “Disp.”

MEMO

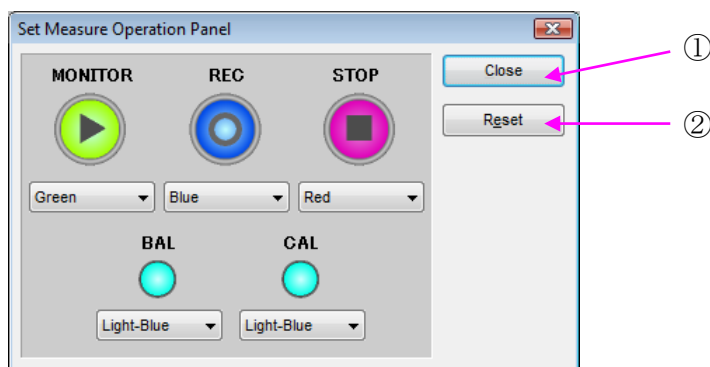
Buttons on the Measure Operation Panel vary with the measuring instrument.

■ To change the button color

(1) Operate the DCS-100A by any of the following.

- Click the View - Control Bar - Measure Operation Panel - Customize....
- Right-click the Measure Operation Panel and click the **Customize..** on the pop-up-menu.
- Double-click the Meas Operation Panel.

(2) The following window appears.



- ① **Close** button Determines the pre-set contents and closes the window.
 ② **Reset** button Resets the button colors to the default status.

MONITOR button **REC** button **STOP** button: Green, blue, or red
BAL button **CAL** button: Light-blue, orange, or purple

(3) Set the color of each button. Then, click the **Close** button to close the window.

2-2-5 Function key bar

Displays the icon menus (tool bar buttons), registered on the function keys (F1 to F12).

The same operation is available by pressing the function keys (F1 to F12) on your keyboard.

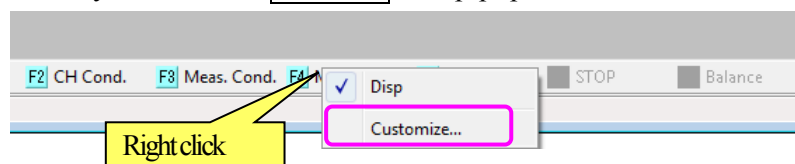
The icon menus (tool bar buttons) are able to be registered or deleted on the function keys (F1 to F12).



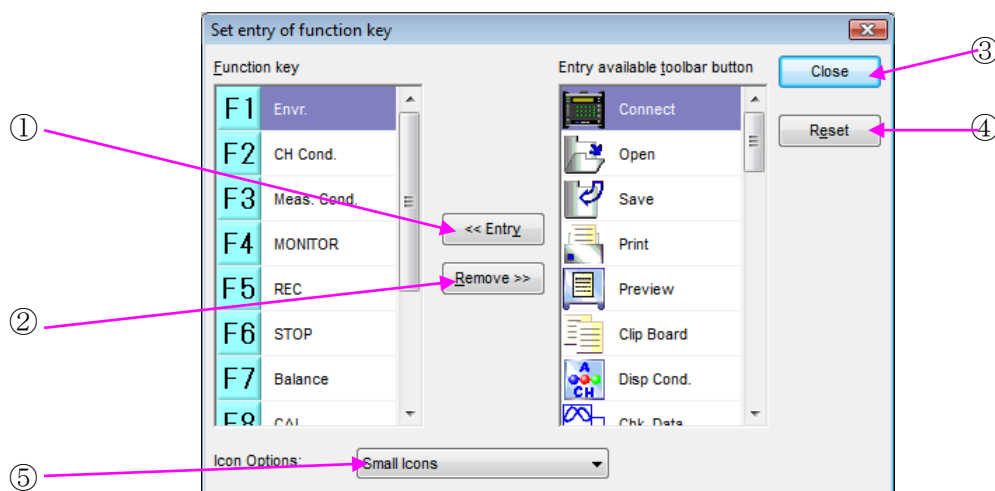
■ To register or delete the icon menus (tool bar buttons) on the function keys (F1 to F12)

(1) Operate the DCS-100A by any of the following.

- Click the View - Control Bar - Function Key Bar -Customize....
- Right-click the Function Key Bar and click the **Customize...** on the pop-up-menu.



(2) The following window appears.



- ① **Add** button Adds the current selecting icon menus (tool bar buttons) on the function keys (F1 to F12).
- ② **Remove** button Removes the current selecting icon menus (tool bar buttons) from the function keys (F1 to F12).
- ③ **Close** button Determines the pre-set contents and closes the window.
- ④ **Reset** button Resets the icon menus (tool bar buttons) on the Function Key Bar to the default status.
- ⑤ **Icon Options** Size of the icon menus (tool bar buttons).
Small Icons/Large Icons

(3) Click the **Add** button/**Delete** button to register the icon menus (tool bar buttons) on the function keys (F1 to F12).

■ To show or hide the function key bar

(1) Operate the DCS-100A by any of the following

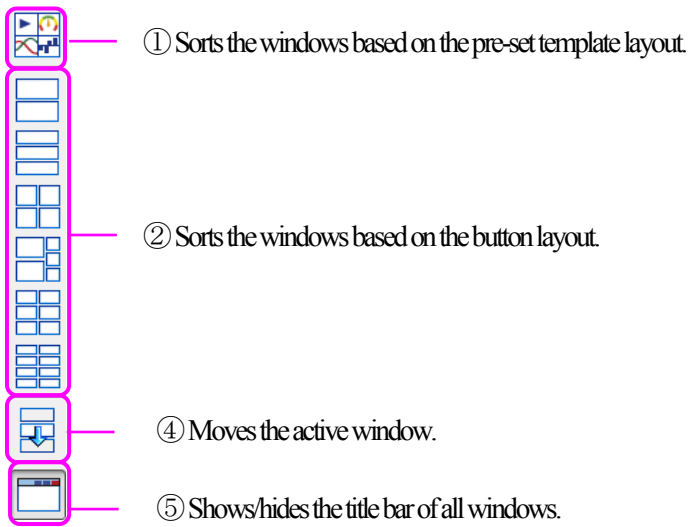
- Click the View - Control Bar - Function Key Bar -Disp.
- Right-click the Function Key Bar and click the **Disp** on the pop-up-menu.

(2) To show: Put a check mark to the check box next to the “Disp.”

To hide: Release a check mark from the check box next to the “Disp.”

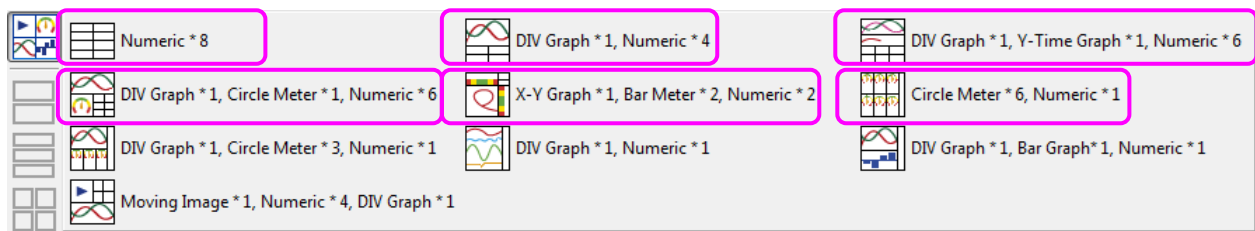
2-2-6 Window disp bar

Displays buttons to sort the Numeric windows/Graph windows and buttons to show/hide the title bar.
The buttons are able to be added, deleted, and sorted.

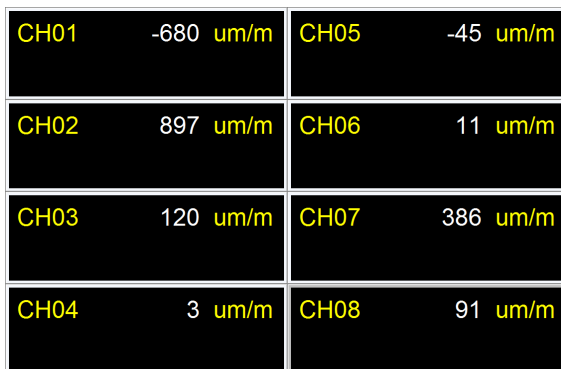


■ Template layout

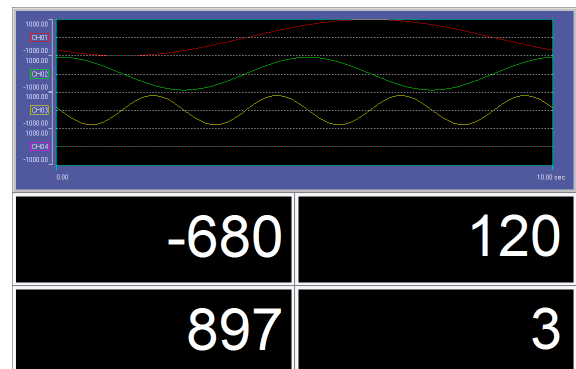
Sorts the windows based on the pre-set template layout.



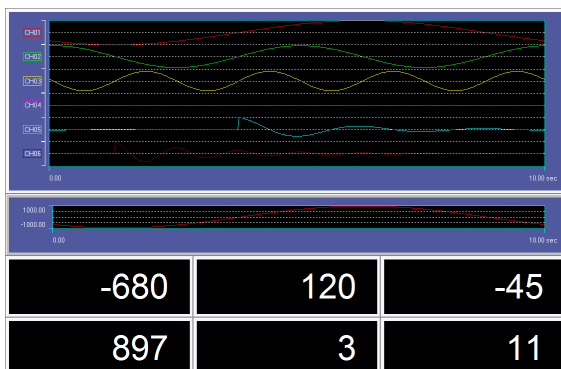
● “Numeric Graph×8”



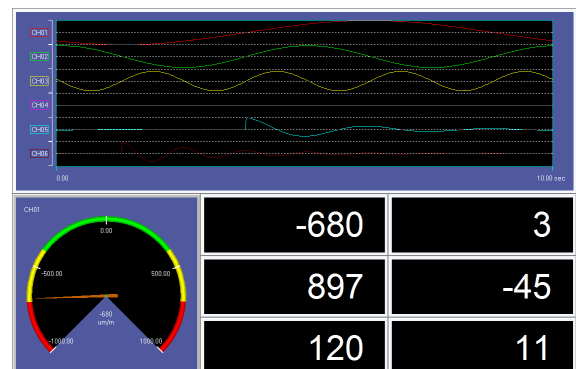
● “DIV Graph×1 and Numeric Graph×4”



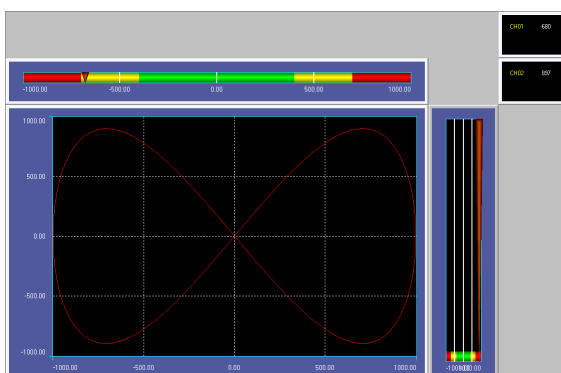
● “DIV Graph×1, Y-Time Graph×1, Numeric Graph×6”



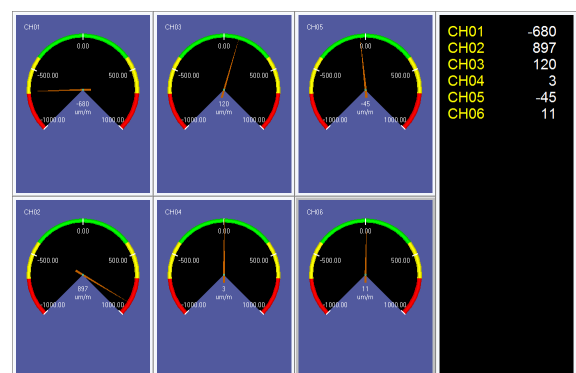
● “DIV graph×1, Circle Graph×1, Numeric Graph×6”



● “X-Y Graph×1, Bar Graph×2, Numeric Graph×2”



● “Circle Graph×6, Numeric Graph×1”

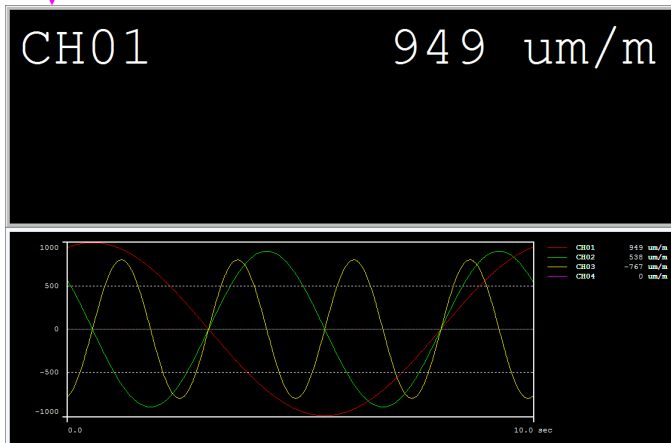
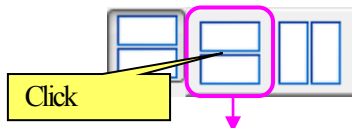


■ Button layout

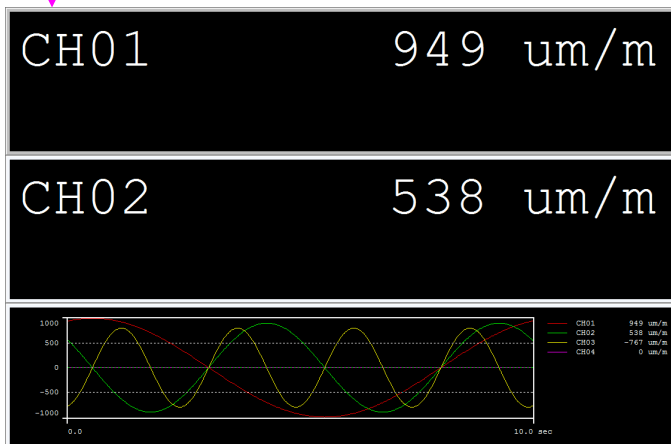
Sorts the windows based on the button layout.

Windows will appear in active window → Numeric window → Graph window.

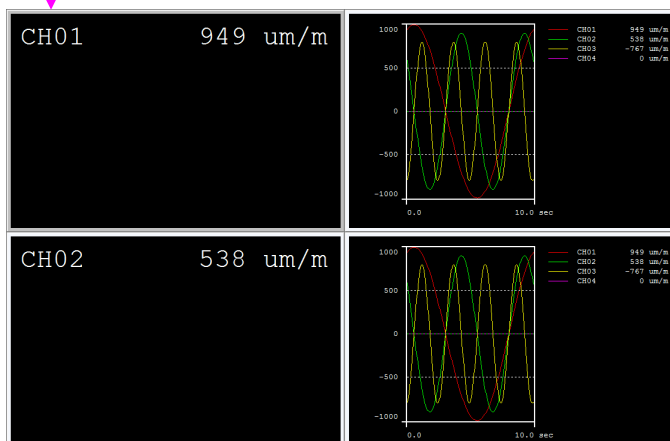
● 2 windows

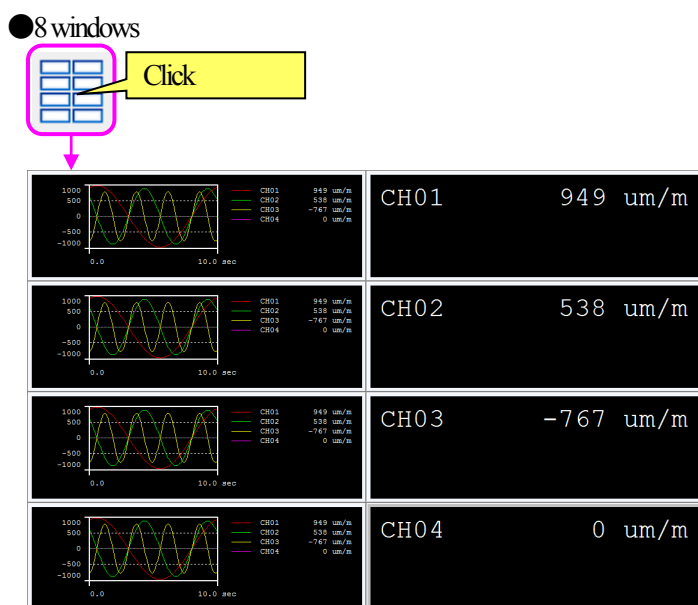
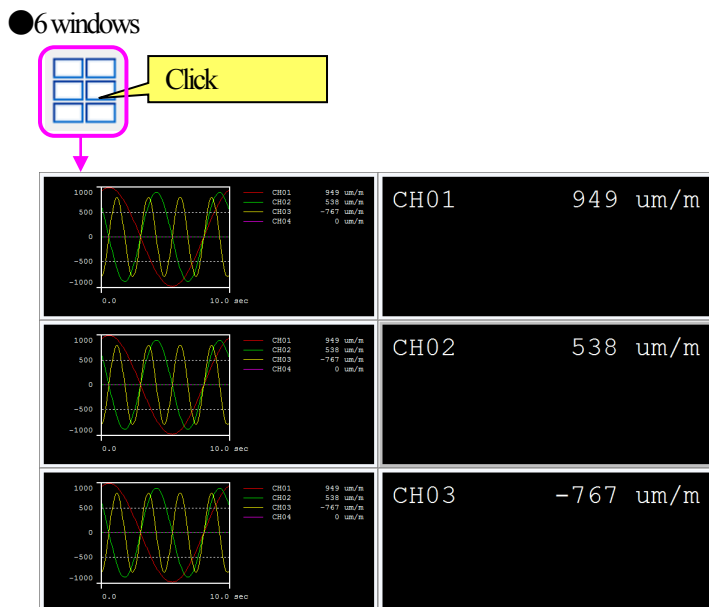
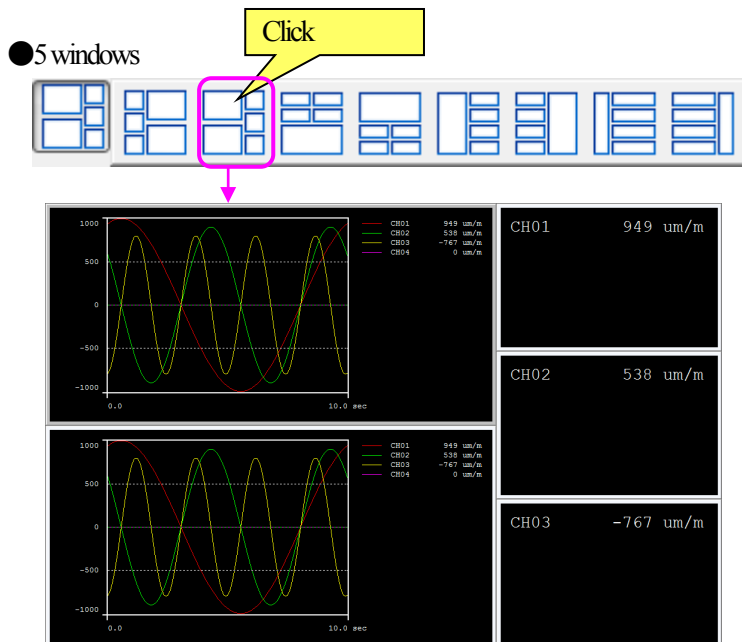


● 3 windows



● 4 windows

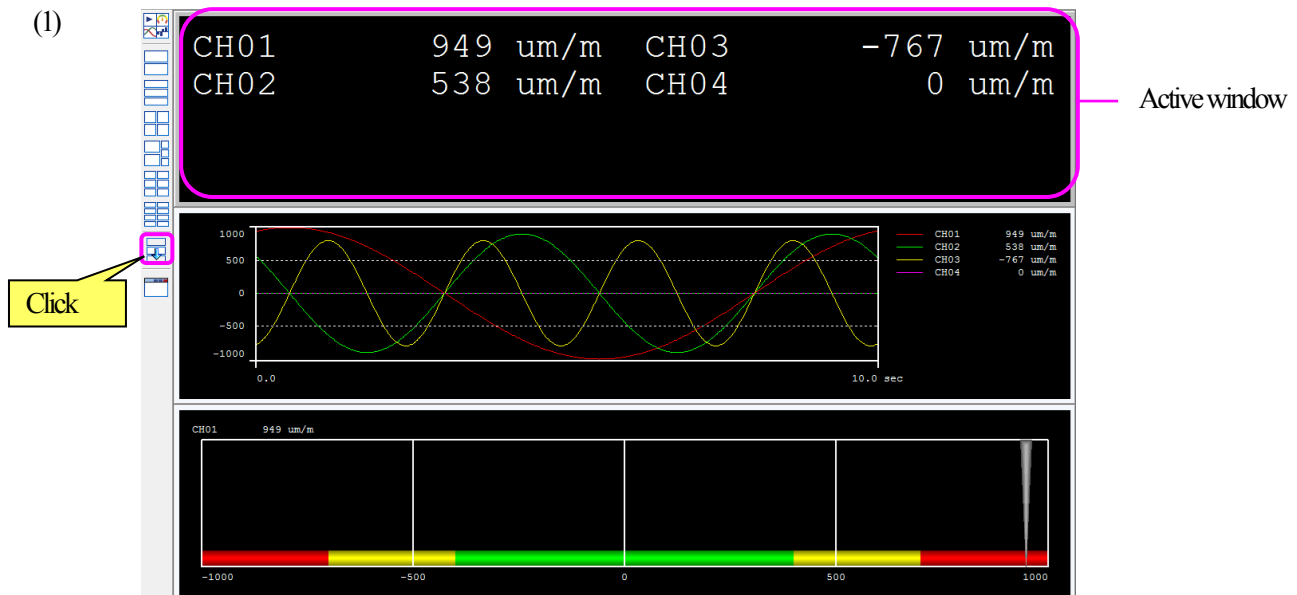




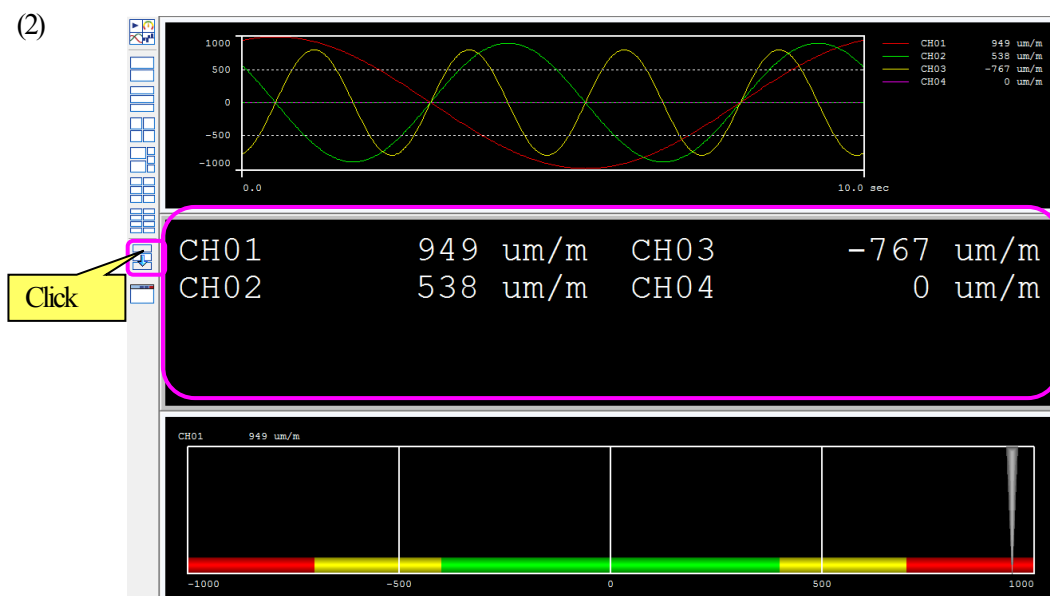
■ To move the active window

To move the active window, click the button.

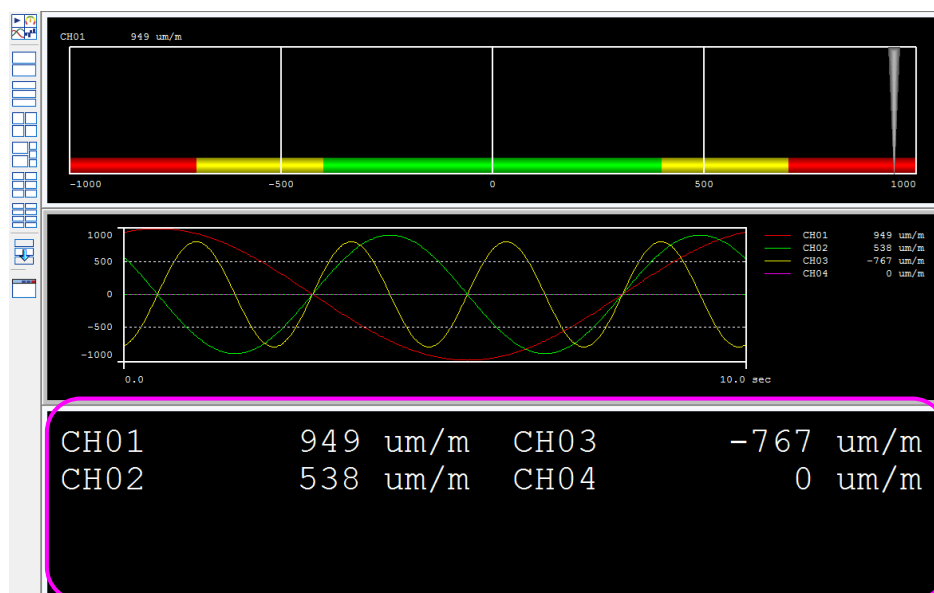
(1)



(2)



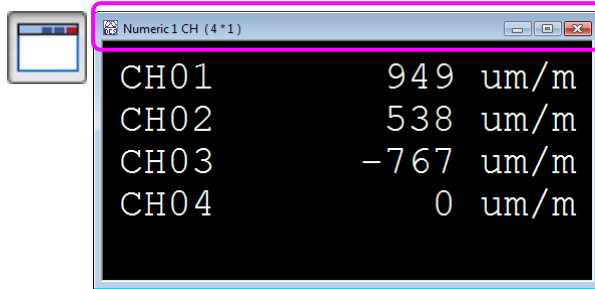
(3)



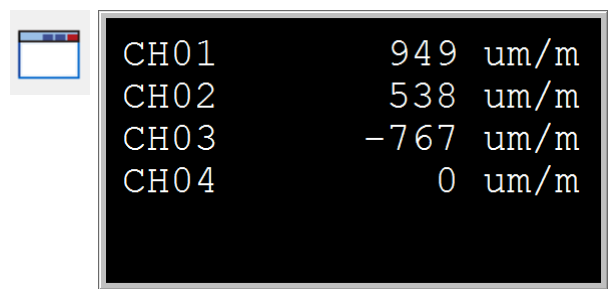
■ To show or hide the title bar

To show/hide the title bar of all windows, turn ON/OFF the button.

● Show the title bar: Button ON



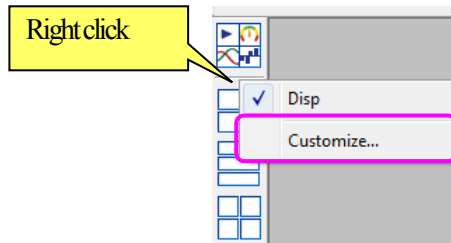
● Hide the title bar: Button OFF



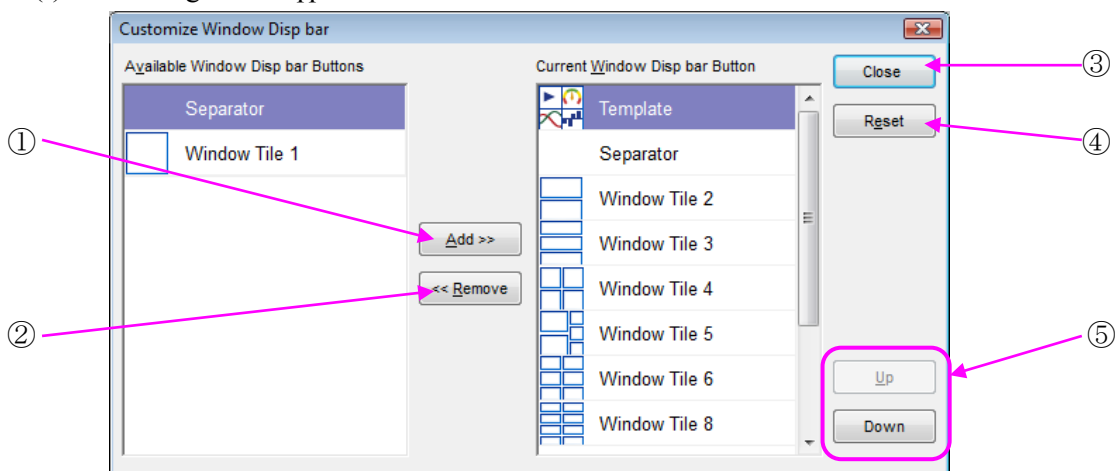
■ To add, delete, and sort the buttons

(1) Open the Customize Window Disp Bar window by any of the following.

- Click the View - Control Bar - Window Disp Bar - Customize....
- Right-click the Window Disp Bar and click the Customize... on the pop-up-menu.



(2) The following window appears.



- | | |
|---------------------------------------|--|
| ① Add button | Adds the current selecting buttons on the Window Disp Bar. |
| ② Remove button | Removes the current selecting buttons from the Window Disp Bar. |
| ③ Close button | Determines the pre-set contents and closes the window. |
| ④ Reset button | Resets the buttons on the Window Disp Bar to the default status. |
| ⑤ Up button Down button | Sorts the current selection buttons. |

(3) Click the **Add** button/**Delete** button to display the buttons on the Window Disp Bar.

■ To show or hide the Window Disp Bar

(1) Operate the DCS-100A by any of the following

- Click the View - Control Bar - Window Disp Bar - Disp.
- Right-click the Window Disp Bar and click the **Disp** on the pop-up-menu.

(2) To show: Put a check mark to the check box next to the “Disp.”

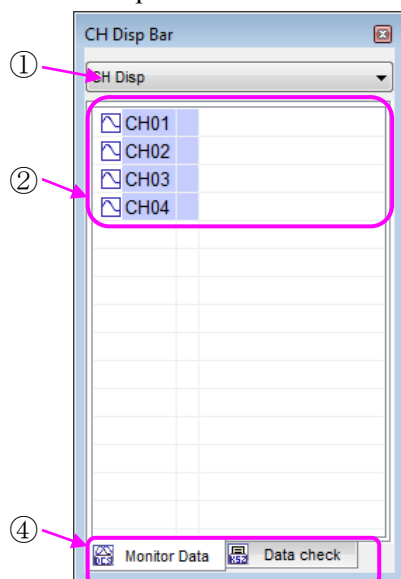
To hide: Release a check mark from the check box next to the “Disp.”

2-2-7 CH disp bar

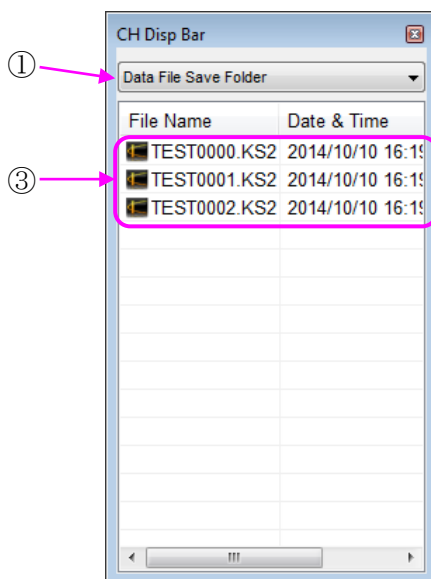
Displays the current measuring channels and recording channels, while checking data.

Channels on the CH Disp Bar are able to be set on the Numeric windows/Graph windows by drag-and-drop operations.

● CH Disp



● Data File Save Folder



① CH/Data list

CH Disp or Data File Save Folder.

② Channels

Displays the channels based on the [CH] tab.

③ Data files

Displays the data files, saved in the data file save folder.

To check data on the graph window, double-click the data file.

④ [CH] tab

Monitor Data or Data Check

Monitor Data:

Displays the current measuring channels on the ② Channels.

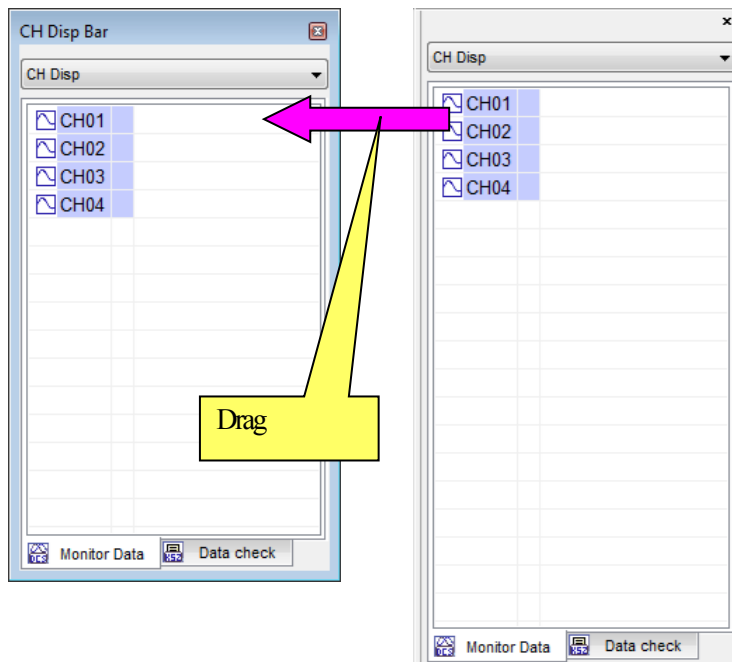
Data Check:

Displays the recording channels, while checking data, on the ② Channels.

■ To detach the CH Disp Bar

To detach the CH Disp Bar, drag it from the main window frame.

To attach the CH Disp Bar, drag it to the main window frame.

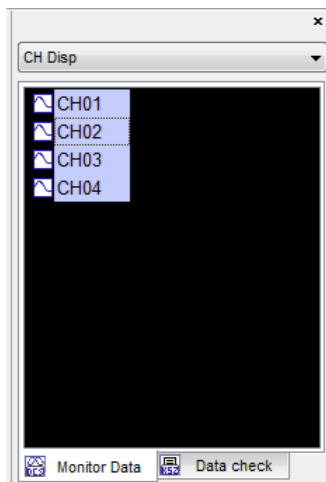


■ To change the color on the CH Disp Bar

(1) Operate the DCS-100A by any of the following.

- Click the View - Control Bar - CH Disp Bar - Change Color Style.
- Right-click the CH Disp Bar to display the pop-up-menu.
- Click the Change Color Style on the pop-up-menu.

(2) The color on the CH Disp Bar changes. (In the following example, the color is black.)



■ To show or hide the CH Disp Bar

(1) Operate the DCS-100A by any of the following.

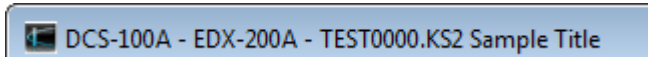
- Click the View - Control Bar - CH Disp Bar - Disp.
- Right-click the CH Disp Bar to display the pop-up-menu.
- Click the Disp on the pop-up-menu.

(2) To show: Put a check mark to the check box next to the "Disp."

To hide: Release a check mark from the check box next to the "Disp."

2-2-8 Main title bar

Displays the DCS-100A model, current device to be controlled, data file name, and file title.

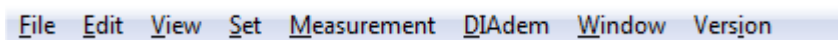


■ To show or hide the main title bar

- (1) Operate the DCS-100A by any of the following.
 - Click the View - Control Bar - Main Title Bar.
 - Right-click the empty area on the MAIN window, where no Numeric windows/Graph windows exists, to display the pop-up-menu.
 - Click the **Main Title Bar** on the pop-up-menu.
- (2) To show: Put a check mark to the check box next to the Main Title Bar.
To hide: Release a check mark from the check box next to the Main Title Bar.

2-2-9 Menu bar

Provides pull-down menu.



■ To show or hide the Menu Bar

- (1) Operate the DCS-100A by any of the following.
 - Click the View - Control Bar - Menu Bar.
 - Right-click the empty area on the MAIN window, where no Numeric windows/Graph windows exists, to display the pop-up-menu.
 - Click the **Menu Bar** on the pop-up-menu.
- (2) To show: Put a check mark to the check box next to the "Menu Bar."
To hide: Release a check mark from the check box next to the "Menu Bar."

2-2-10 To print

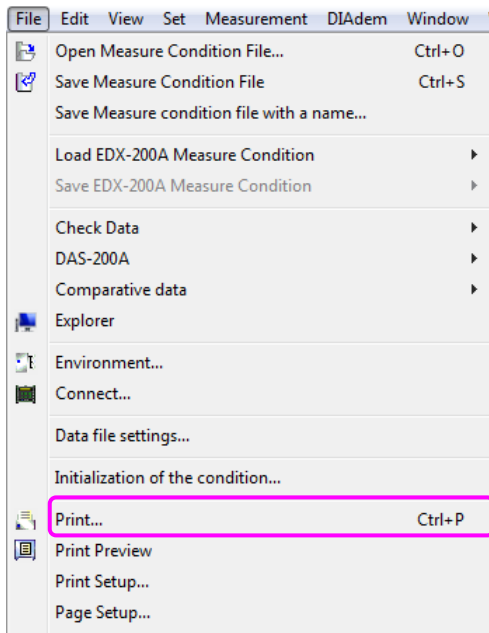
Prints or print-previews the active Numeric windows/Graph windows.

■ To print the data

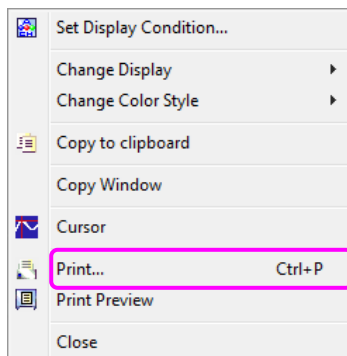
(1) Activate the Numeric windows/Graph windows.

(2) Operate the DCS-100A by any of the following

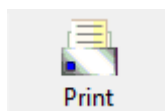
- Click the File-Print...



- Right-click the Numeric windows/Graph windows to display the pop-up-menu.
Click the **Print...** on the pop-up-menu.
(In the following example, the graph window is Y-Time Graph.)

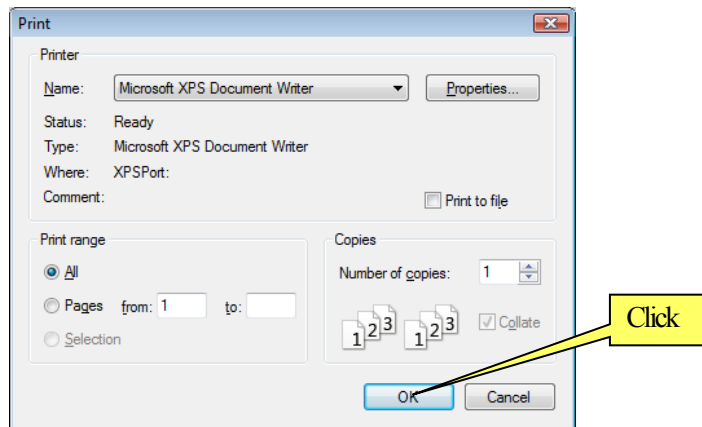


- Click the **Print** icon from the tool bar.



- Press the [Ctrl] + [P] on your keyboard.

(3) The following window appears. Click the **OK** button.

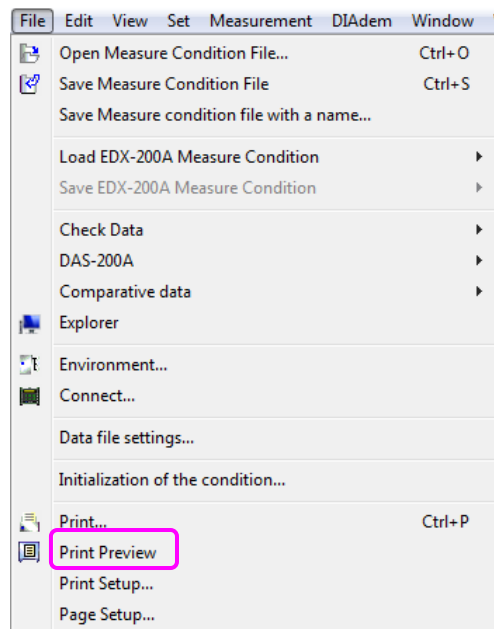


■ To print-previews the data

(1) Activate the Numeric windows/Graph windows.

(2) Operate the DCS-100A by any of the following.

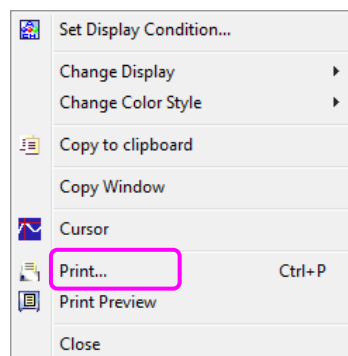
- Click the File - Print Preview.



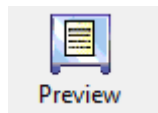
- Right-click the Numeric windows/Graph windows to display the pop-up-menu.

Click the **Print Preview** on the pop-up-menu.

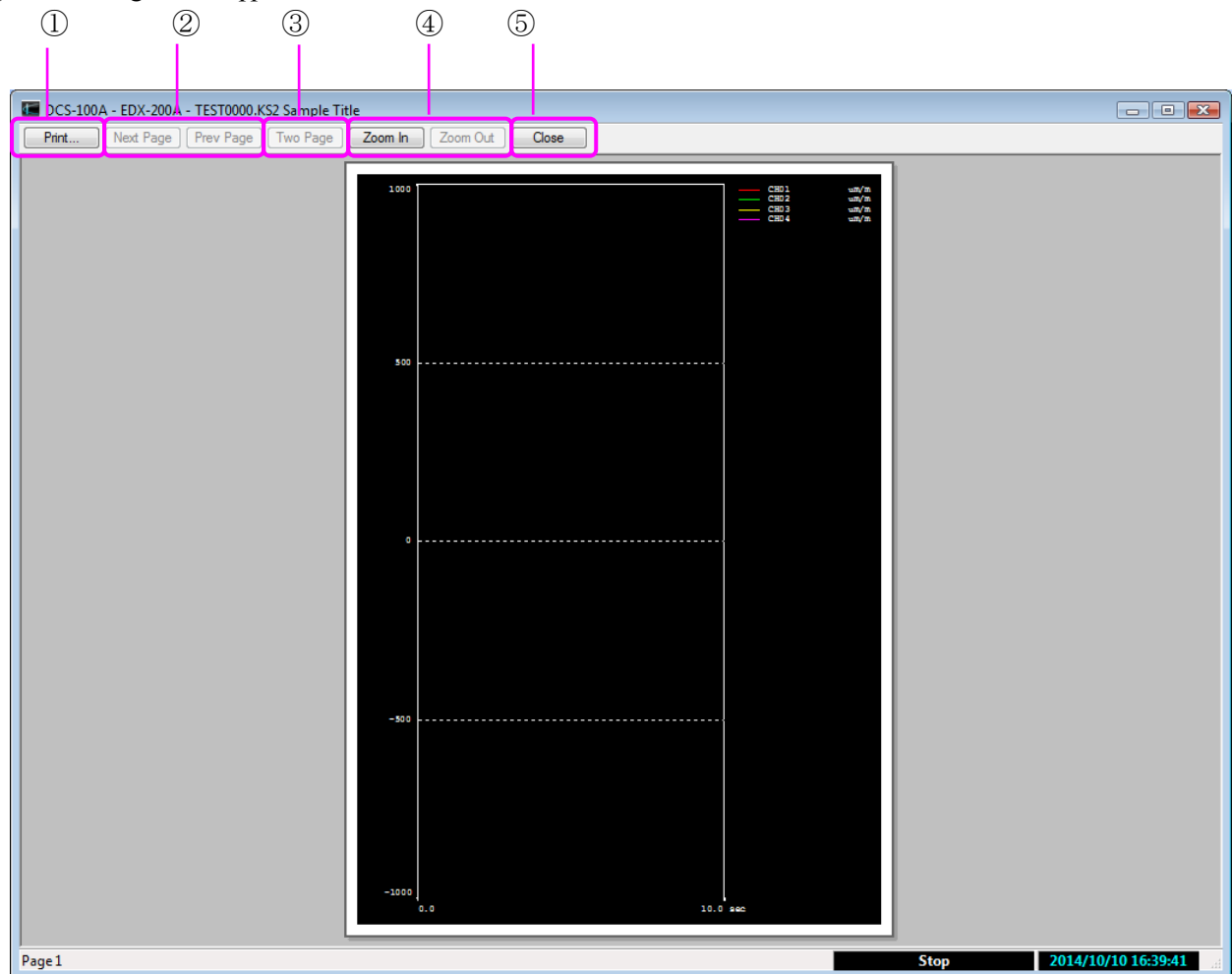
(In the following example, the graph window is Y-Time Graph.)



- Click the **Preview** icon from the tool bar.



(3) The following window appears.



① **Print** button

Prints the current image, described on the Print Preview window.

② **Next Page** / **Prev Page** button

Displays the next/previous page when the print out contents ranges in multiple pages.

③ **One Page** / **Two Page** button

Specifies the number of pages displayed at a time.

④ **Zoom In** / **Zoom Out** button

Zooms in/Zooms out the display.

⑤ **Close** button

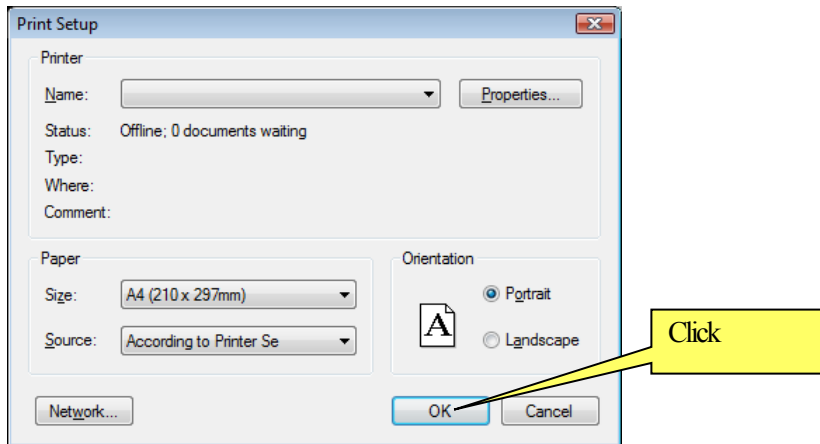
Closes the window and return to the MAIN window.

■ To set the printer settings

- (1) Click the File - Print Setup....
- (2) The following window appears.

Set the printer settings.

Click the **OK** button.

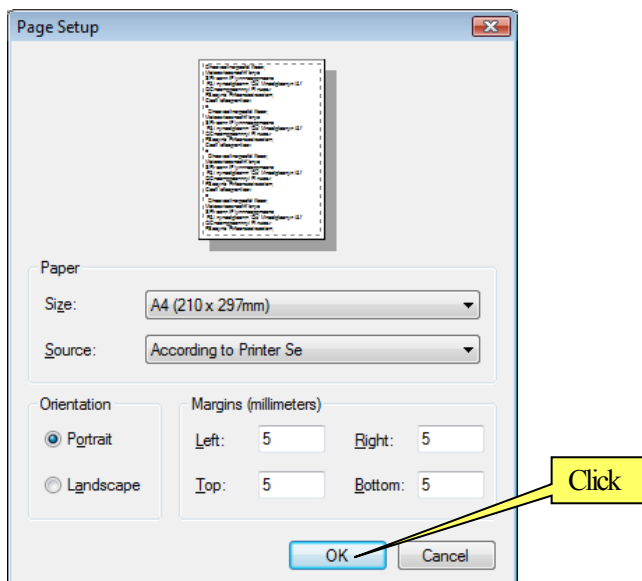


■ To set the page settings

- (1) Click the File - Page Setup....
- (2) The following window appears.

Set the margins, etc.

Click the **OK** button.



3. Monitor window

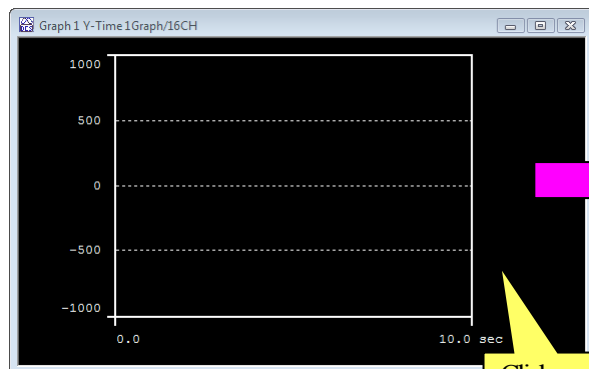
This section describes how to display the monitor data on the Numeric windows/Graph windows in real time.

3-1 To activate

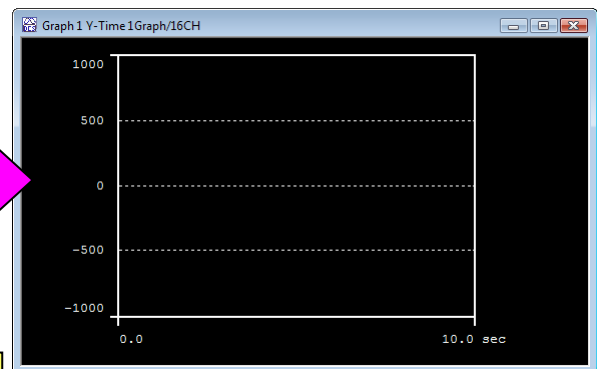
The menu bar, tool bar button, and function key are for the active Numeric windows/Graph windows.

To activate the Numeric windows/Graph windows, click the Numeric windows/Graph windows.

● Inactive window



● Active window



Click

3-2 To display

3-2-1 Numeric windows

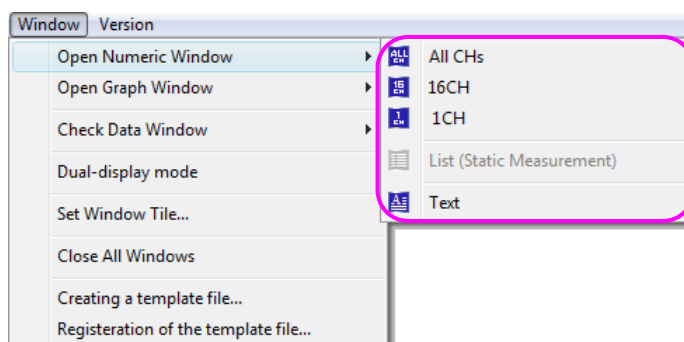
The numeric window displays the numeric value, arbitrary character string, current time, etc. of the monitor data.

Single numeric window is able to display maximum 100 channels.

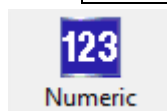
■ To display the numeric window.

Open the numeric window by any of the following.

- Click the Window - Open Numeric Window - target item.



- Click the **Numeric** icon from the tool bar.



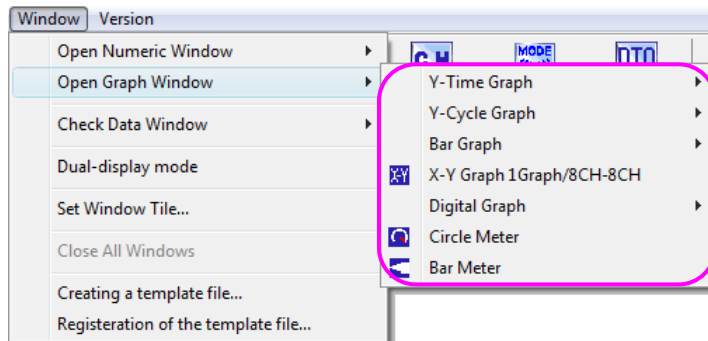
3-2-2 Graph windows

The graph window displays the monitor data in waveform.

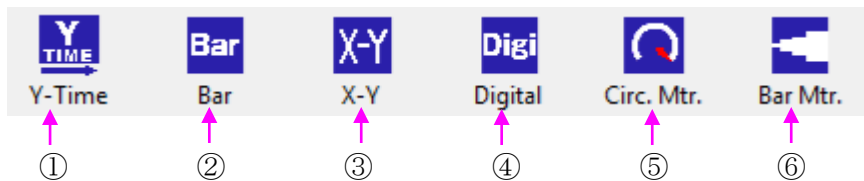
■ To display the graph window.

Open the graph window by any of the following.

- Click the Window - Open Graph Window - target item.



- Click the target icon from the tool bar.



① Y-Time Graph X-axis represents the time axis.

② Bar Graph Single graph window is able to display maximum 32 channels.

Displays the monitor data by using bars.

Single Bar Graph is able to display maximum 32 channels.

③ X-Y Graph Relative graph that displays the monitor data on x-axis and y-axis.

Single graph window is able to display maximum 8 pairs

(x-axis: 8 channels, y-axis: 8 channels).

④ Digital Graph Displays the digital data in binary digit system.

Single graph window is able to display maximum 16 bits.

⑤ Circular Meter Displays the monitor data by using a circular chart.

The number of channels to be displayed is maximum 1 channel.

⑥ Bar Meter Displays the monitor data by using bar charts.

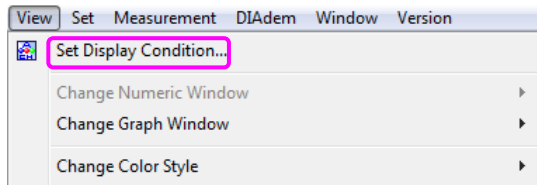
The number of channels to be displayed is maximum 1 channel.

3-3 Set display condition window

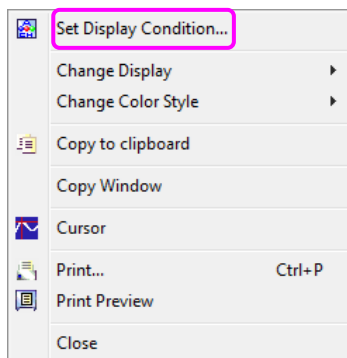
This section describes the common operations that can be performed on the Set Display Condition... window.

■ To display the Set Display Condition... window.

- (1) Activate the Numeric windows/Graph windows.
- (2) Operate the DCS-100A by any of the following.
 - Click the View - Set Display Condition...



- Right-click the Numeric windows/Graph windows to display the pop-up-menu.
Click the Set Display Condition... on the pop-up-menu.
(In the following example, the graph window is Y-Time Graph.)



- Click the Disp Cond. icon from the tool bar.



- Double-click the Numeric windows/Graph windows.
- (3) The Set Display Condition... window appears.

3-3-1 Scale values on the graph windows

Select the scale values of graph windows by any of the following.

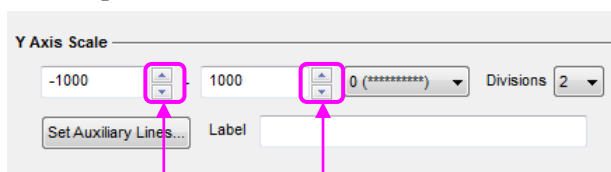
- Input numerical values directly.
- Click the spin button.

Up arrow: Increases the numerical value in 1/2/5 step.

[Example] 10 → 20 → 50 → 100

Down arrow: Decreases the numerical value in 1/2/5 step.

[Example] 10 → 5 → 2 → 1



Spin button on the y-axis scale.

3-3-1-1 Auto scale button

Automatically sets the scale values, in accordance with the displayed data (monitor data and record data), in 1/2/5 step.

x-axis ON:  OFF: 

y-axis ON:  OFF: 

3-3-1-2 Full scale (F.S.) button

Draws the displayed data (monitor data and record data), in the full scale value.

ON:  OFF: 

MEMO

- Calculate the F.S. value of every channel by using the following equation.
F.S. value = Setting range × Calibration constant + Offset
- Automatically sets the scale values, in accordance with the setting range, calibration constant, and offset.

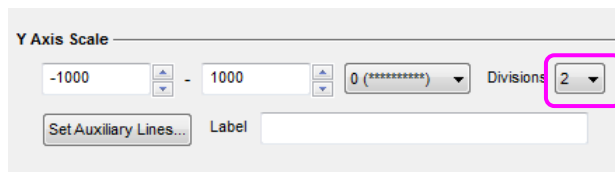
3-3-1-3 Grid line button

Displays the grid lines on graphs.

x-axis ON:  OFF: 

y-axis ON:  OFF: 

Select the number of divisions from the following list.



The number of divisions on the y-axis

3-3-1-4 Scale-linked button

Sets the positive (+) scale value in accordance with the negative (-) scale value.

[Example]

When you change the positive (+) scale value from 1000 to 2000, the DCS-100A automatically sets the negative (-) scale value from -1000 to -2000.

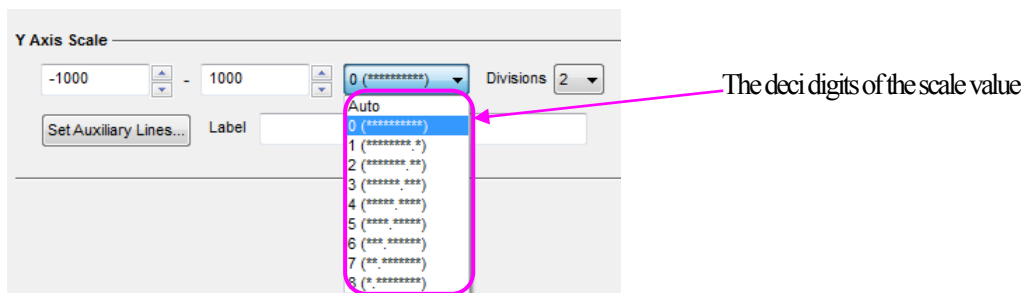
x-axis ON:  OFF: 

y-axis ON:  OFF: 

3-3-1-5 Deci digits of the scale value

Sets the deci digits of the x-axis scale value/y-axis scale value.

Select the deci digits of the scale value from the following list.

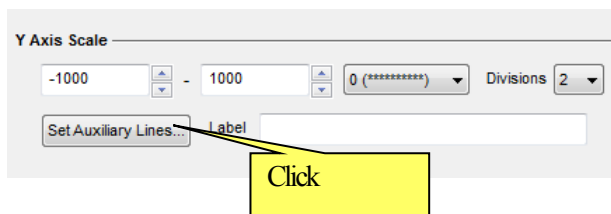


3-3-1-6 Auxiliary line button

Displays the auxiliary lines on the graph.

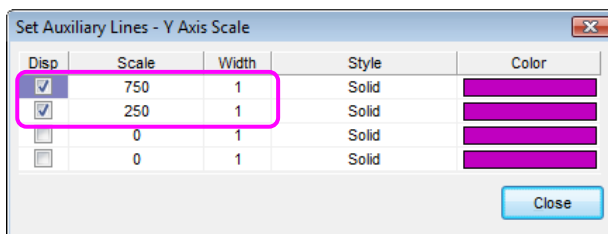
■ To set the auxiliary lines.

(1) Click the **Auxiliary line** button of the target axis.



(2) The following window appears.

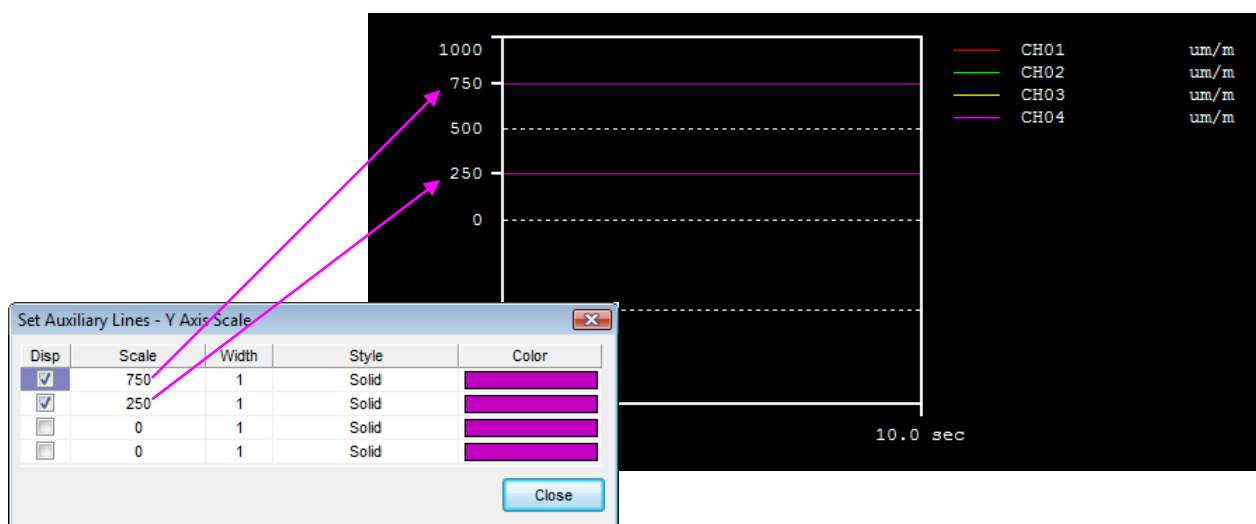
Put a check mark to the “Display” box and input the scale value.



(3) Then, click the **Close** button to close the window.

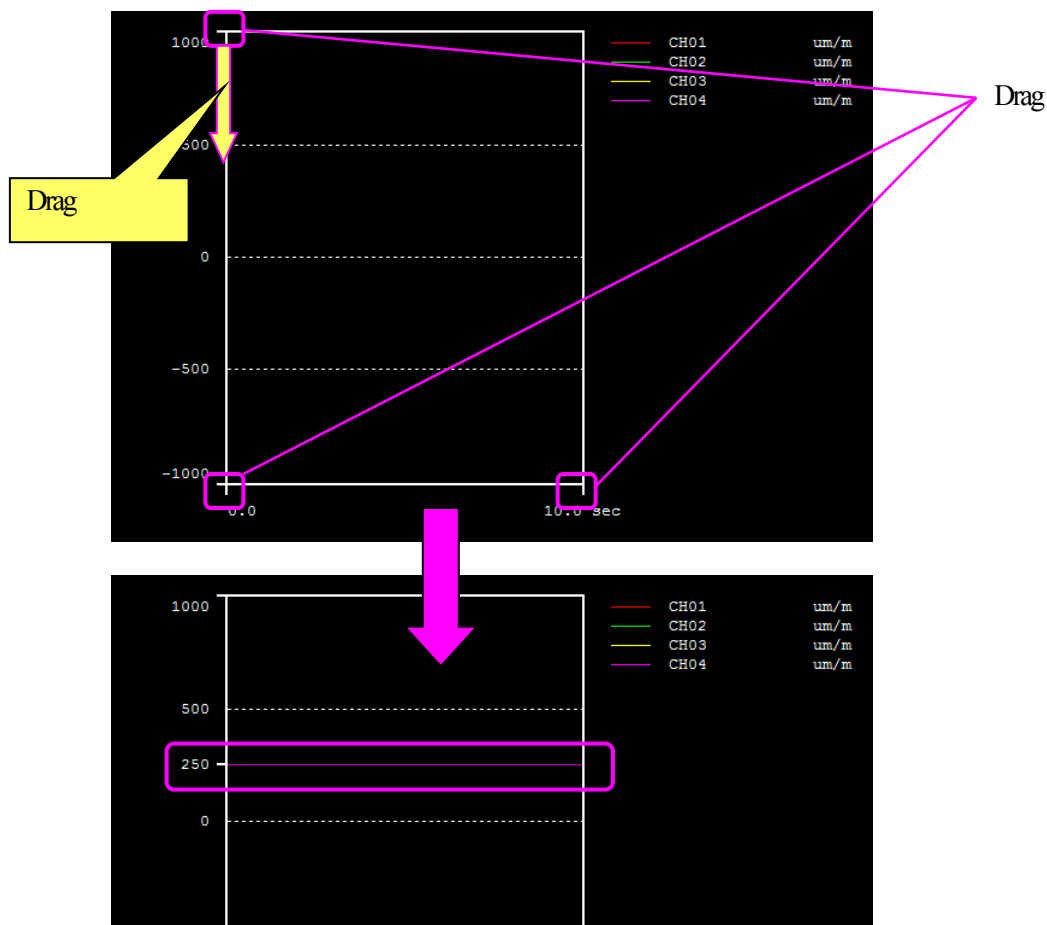
Click the **OK** button to close the Set Display Condition... window.

The auxiliary lines appear on the graph window.

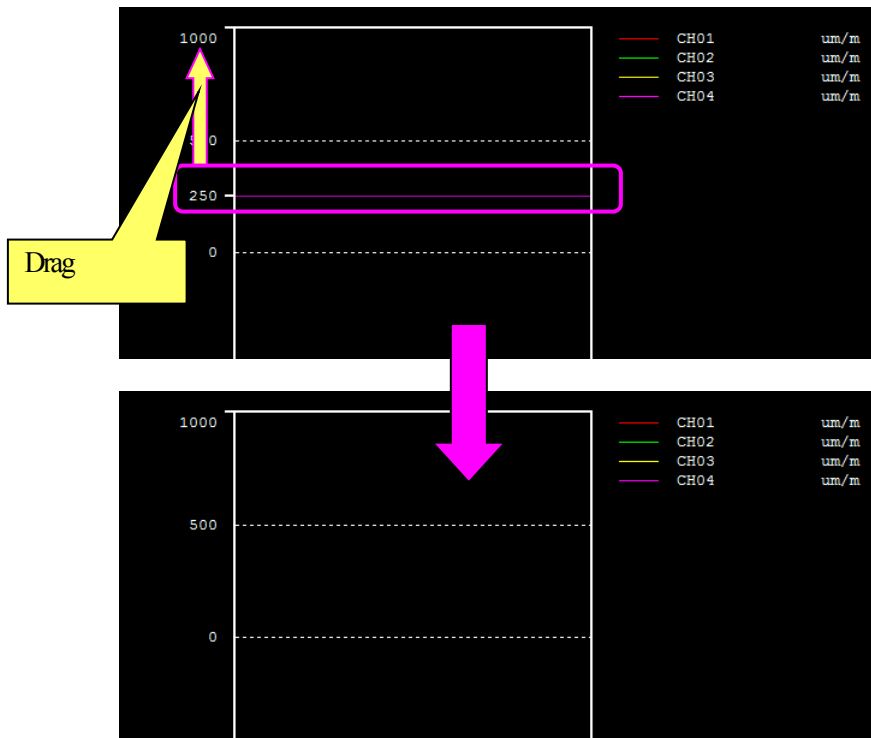


■ To move/delete the auxiliary lines on the graph window

To move the auxiliary line, drag the target section as follows..



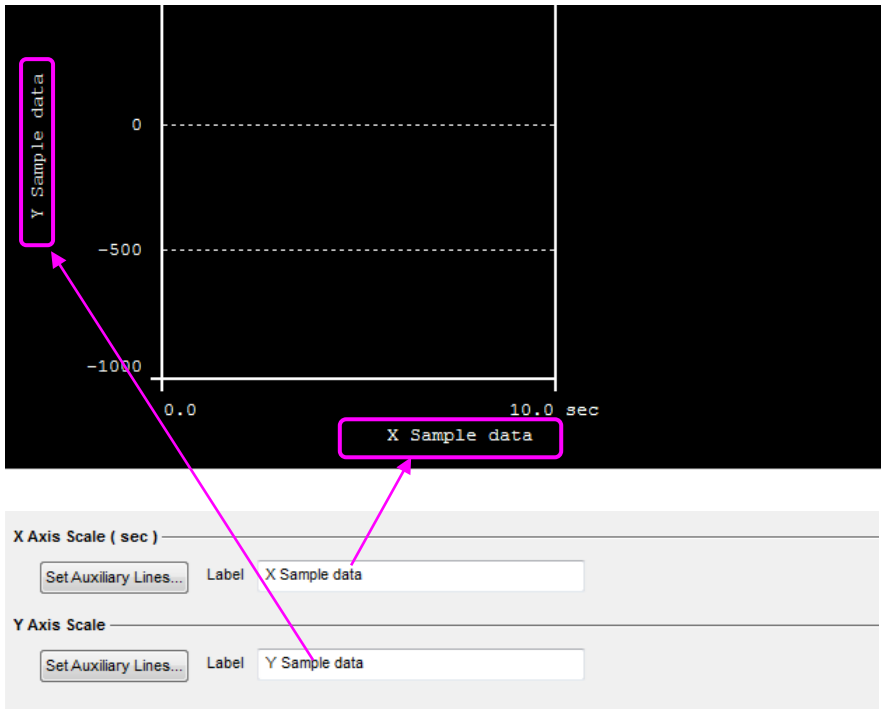
To delete the auxiliary line, drag the auxiliary line to the top/bottom of the graph.



3-3-1-7 Axis label

Displays the axis label on the graph.

The number of character string is maximum 40.



3-3-2 To thin the data on the graph window

This section describes how to change the number of thinning data of the displayed data on the graph window.

Thinning

☐ Automatically thin data to a window size. The number of thinning data

① Automatically thin data to a window size.

Thins the data by deciding the number of thinning data automatically, based on the sampling frequency and current graph window size.

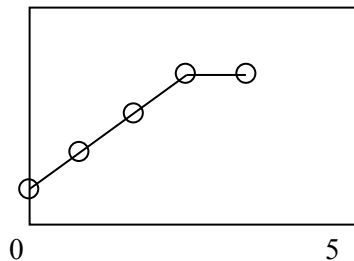
② The number of thinning data

Select the number of thinning data from the following list.

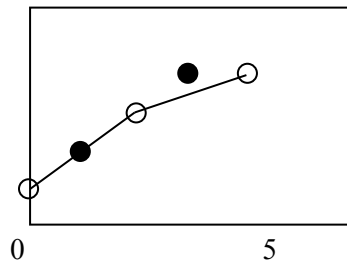
2/5/10/20/50/100/200/500/1000

"—": No thinning

- To not thin data, release a check mark next to the “Automatically thin data to a window size.” and select The number of thinning data “—”.
- The DCS-100A thins the data as follows.



The number of thinning data: —



The number of thinning data: 2

○ : Data to be drawn
● : Data to be thinned

NOTE

The thinning operation is available on the Y-Time Graph and Digital Graph.

The thinning operation is not available on the Bar Graph, X-Y Graph, Circular Meter, and Bar Meter.

3-3-3 [Details] tab

This section describes how to set the following [Details] tab.
(In the following example, the graph window is Y-Time Graph.)

Title

☐ Display. ☐ Set the other Numeric/Graph Windows.

Legends

CH No. CH Name Numeric Unit

Left(Inside) Right(Inside) OutSide

Font

	Font Name	Size	Color
Title	Courier New	10	
Scale	Courier New	10	
Axis Label	Courier New	10	
Legend	Courier New	10	

Line

	Width	Style	Color
Frame Line	2	Solid	
Split Line	1	Dot	
Cursor	1	Solid	

Color

Window Background	
Graph Background	
Value (Normal)	
Value (Over)	

3-3-3-1 To set the title

To set the title on the Numeric windows/Graph windows, set it on the "Title" section.
The number of character string is maximum 100.
Put a check mark to the box next to the "Display" to display the title on the Numeric windows/Graph windows.

Title

Sample Title

☒ Display. ☐ Set the other Numeric/Graph Windows.

Sample Title

1000

500

CH01 um/m

CH02 um/m

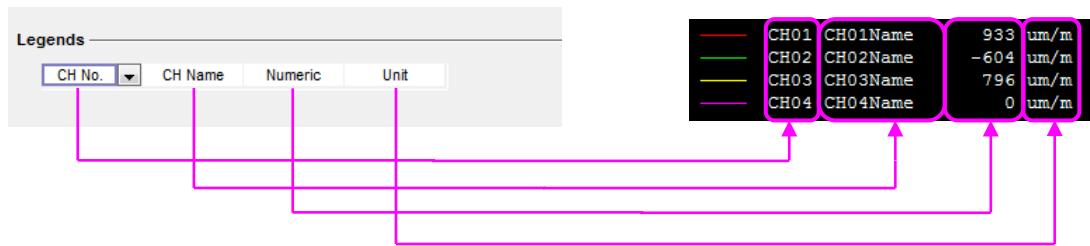
CH03 um/m

CH04 um/m

Put a check mark to the box next to the "Set the other Numeric/Graph Windows." to set the title on the other Numeric windows/Graph windows.

3-3-3-2 To set legends

(1) To set the legends, set them on the "Legends" section.

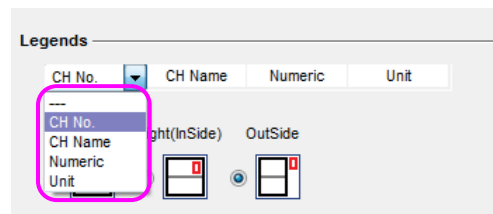


To set the legends.

Click the target box to display the list.

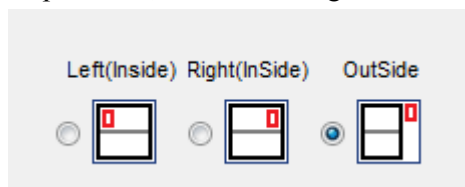
Select the target item from the list.

"—": No item

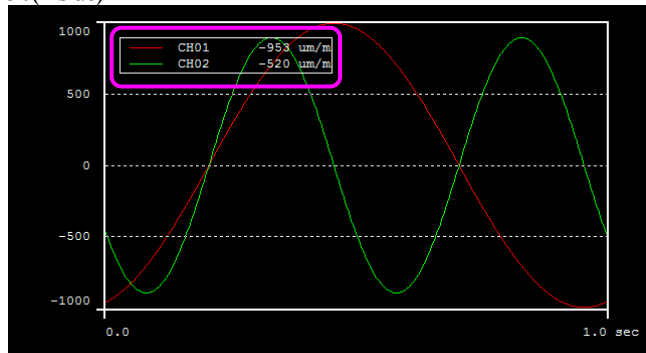


(2) Legend position

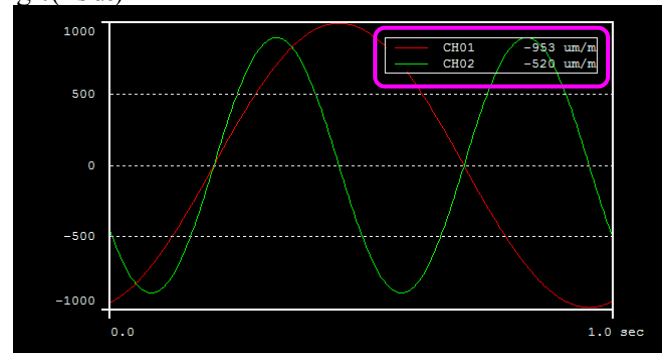
To set the legend position on the Y-Time Graph windows [excluding the 1 Graph/All CHs and 1 Graph/32 CH (DIV)] and X-Y Graph window, select the following item.



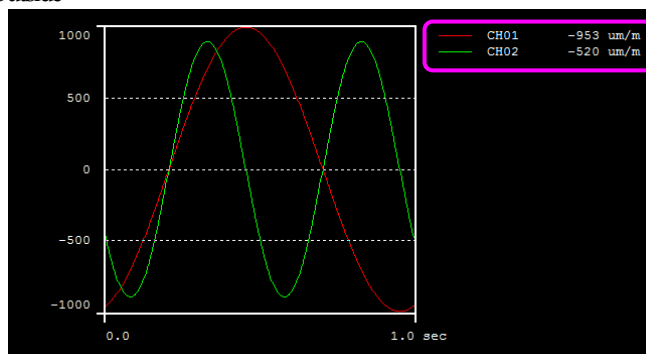
Left(Inside)



Right(Inside)



Outside



MEMO

You are able to change the legend position by dragging the legends on the graph window.

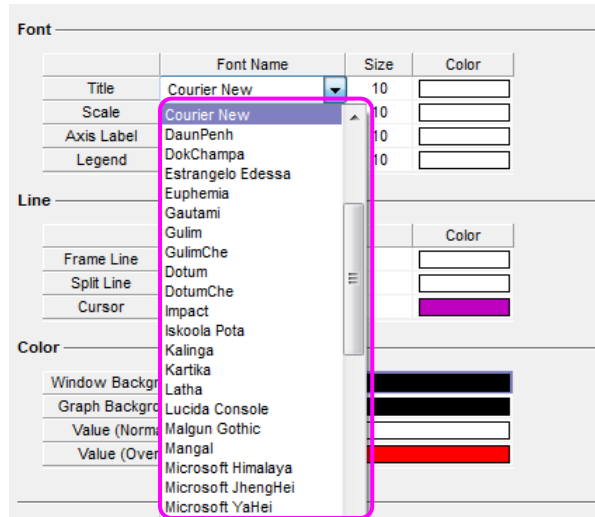
3-3-3-3 To set the fonts.

To set the fonts, sizes, etc., set them on the "Font" section.

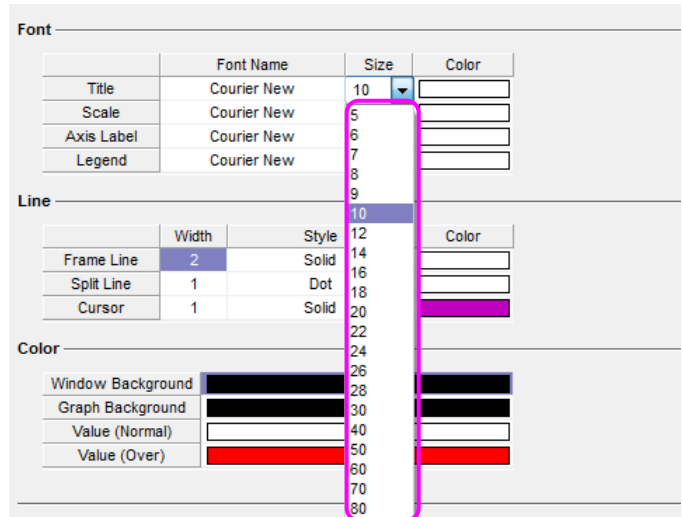
■ To set the fonts

Click the target box to display the list.

Select the target item from the list.



Font Name



Size

Double-click the target color box to display the list.

Select the target item from the list.

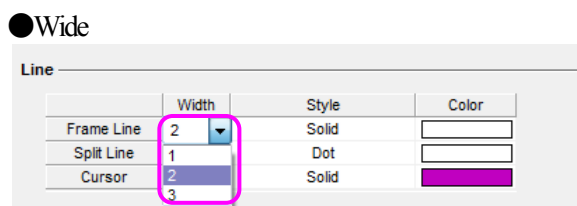
3-3-3-4 To set the lines.

To set the frame lines and grid lines on the graph window, set them on the "Line" section.

■ To set the lines

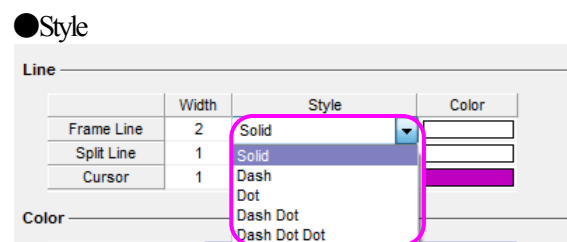
Click the target box to display the list.

Select the target item from the list.



Double-click the target color box to display the list.

Select the target item from the list.



NOTE

When the "Style" is Dash, Dot, Dash Dot, or Dash Dot Dot, the "Width" is 1 only.

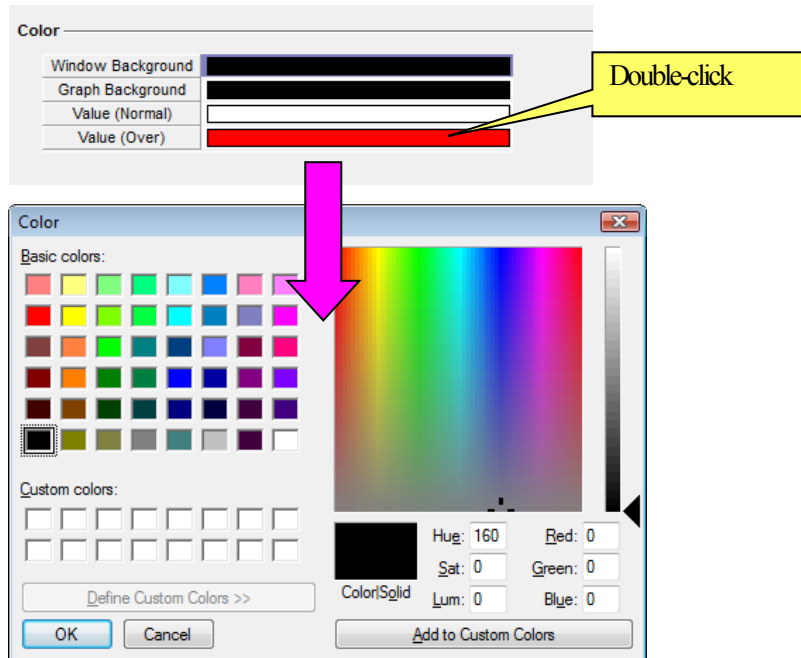
3-3-3-5 To set the colors.

To set the window background color, graph background color, etc., set them on the "Color" section.

■ To set the colors

Double-click the target box to display the Color window.

Select the target item from the Color window.



MEMO

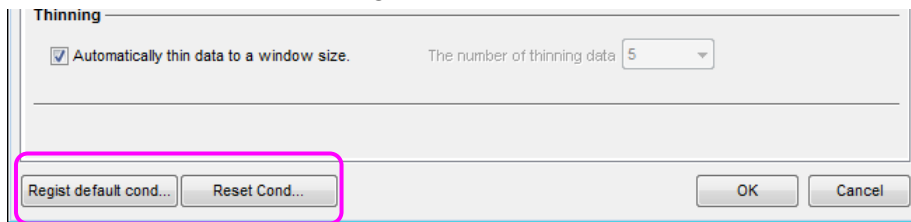
The colors of the legend values are as follows.

When the value is within the setting range: Value (Normal) color

When the value exceeds the setting range: Value (Over) color

3-3-4 To register the default conditions

This section describes how to change the default conditions of the Numeric windows/Graph windows.

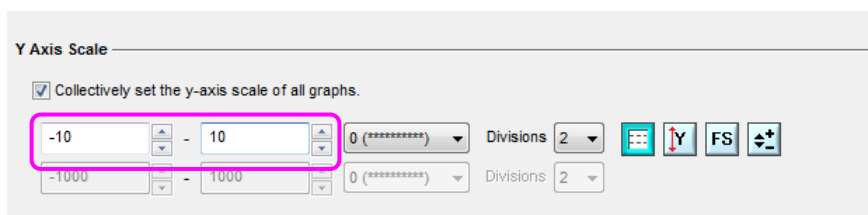


■ To register the default conditions

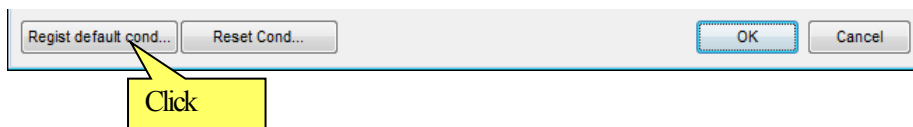
(How to register the default conditions of the Y-Time Graph is described as follows.)

(1) Change the conditions on the Set Display Condition... window.

In the following example, the y-axis scale is changed to -10 and 10.

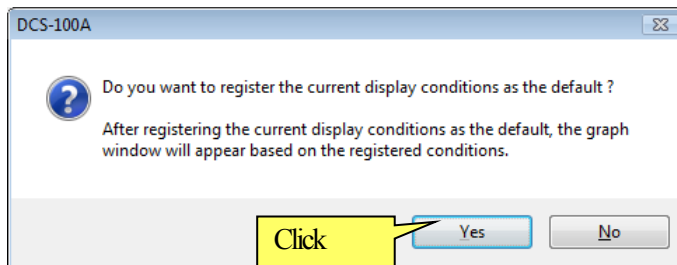


(2) Click the **Register default cond...** button.

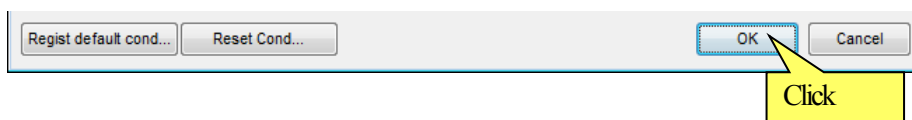


(3) The following message appears.

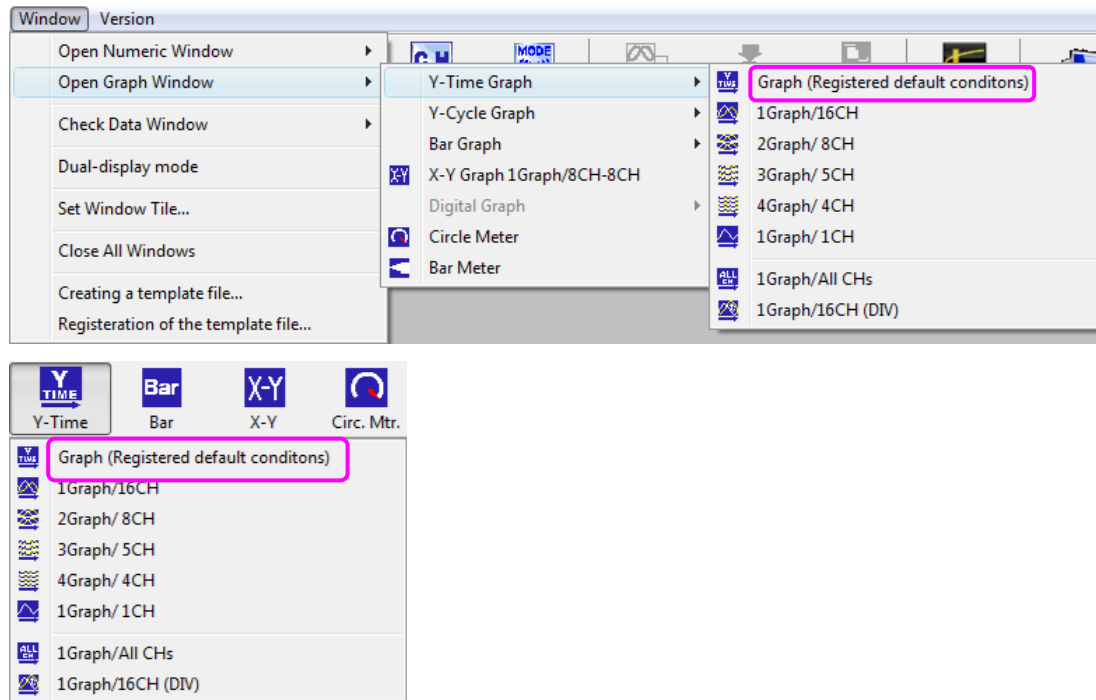
Click the **Yes** button.



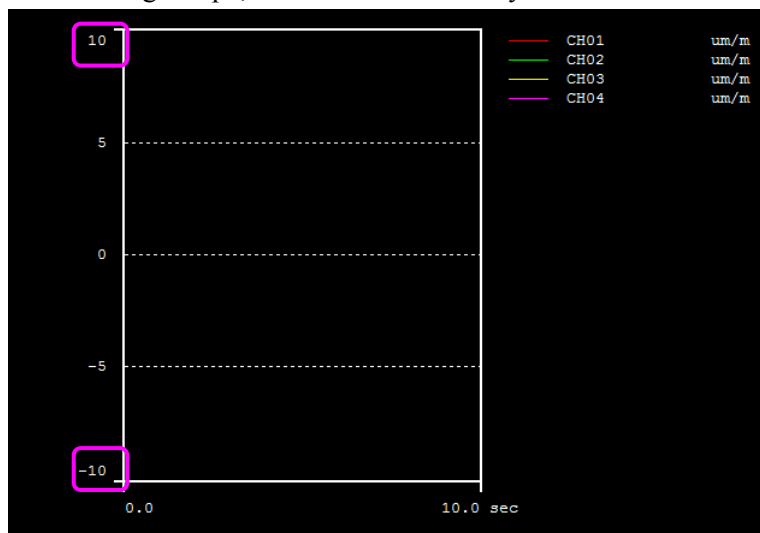
(4) Click the **OK** button to close the window.



(5) The Graph (Registered default conditions) appears on the graph window menu.



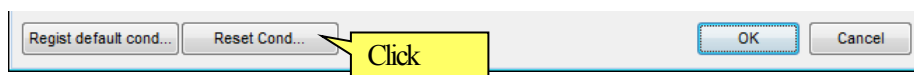
(6) Click The Graph (Registered default conditions) to open the Y-Time Graph based on the registered default conditions.
In the following example, the default conditions of the y-axis scale is -10 and 10.



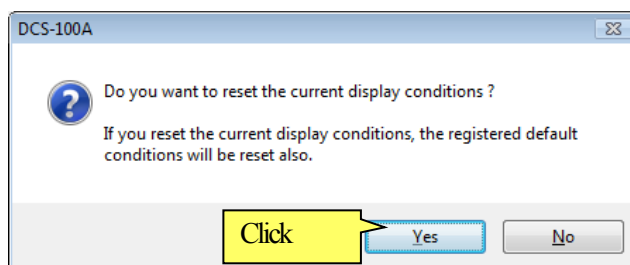
■ To cancel the default conditions

(How to cancel the default conditions of the Y-Time Graph is described as follows.)

(1) Click the **Reset Cond...** button.

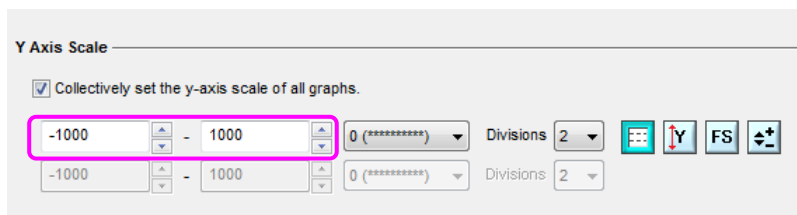


(2) The following message appears. Click the **Yes** button.



(3) Change the conditions to the default conditions on the Set Display Condition... window.

In the following example, the y-axis scale is changed to the default conditions (-1000 and 1000).



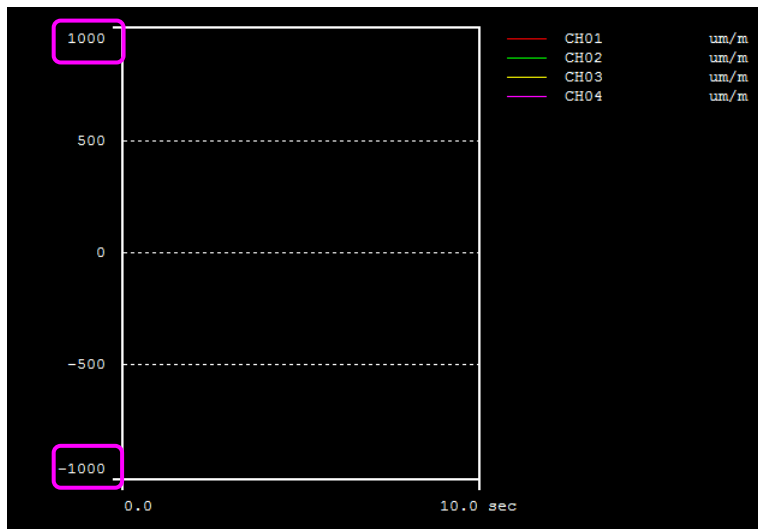
(4) Click the **OK** button to close the window.



(5) The DCS-100A deletes the Graph (Registered default conditions) on the graph window menu.

(6) Click The Y-Time Graph to open the Y-Time Graph based on the default conditions.

In the following example, the y-axis scale is default conditions (-1000 and 1000).



3-4 Graph windows

3-4-1 Y-Time graph

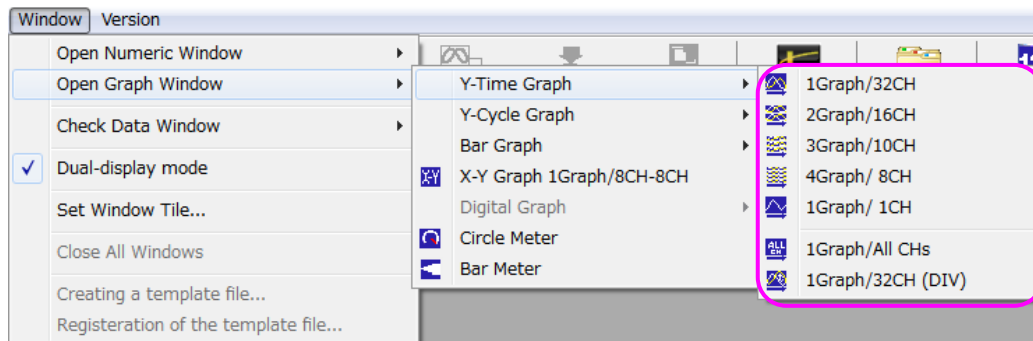
X-axis represents the time axis.

Single graph window is able to display maximum 32 channels.

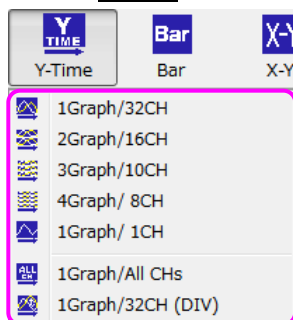
■ To display the Y-Time Graph

Open the Y-Time Graph window by any of the following.

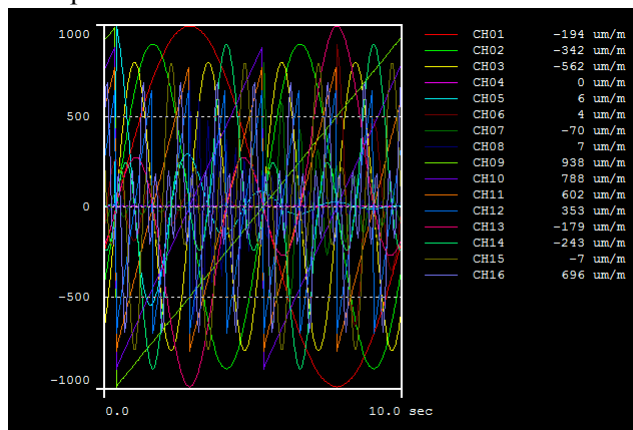
- Click the Window - Open Graph Window - Y-Time Graph.



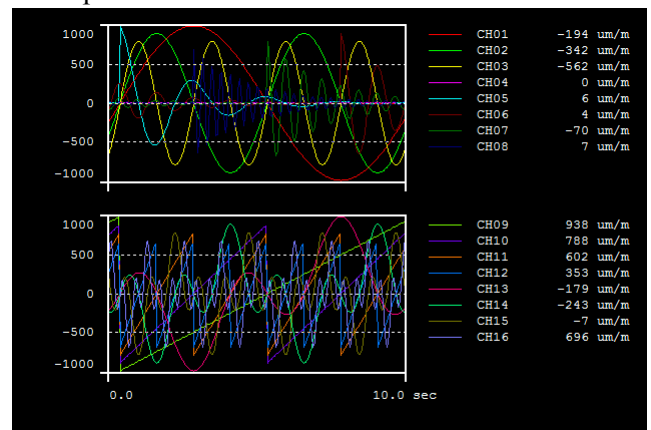
- Click the **Y-Time** icon from the tool bar and click the target item on the pop-up-menu.



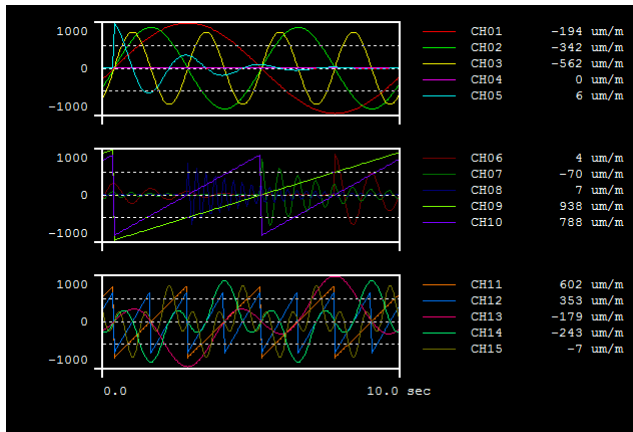
● 1Graph/32CH



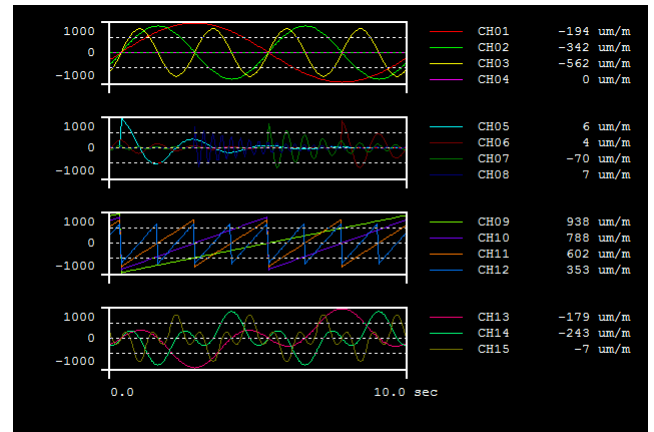
● 2Graph/16CH



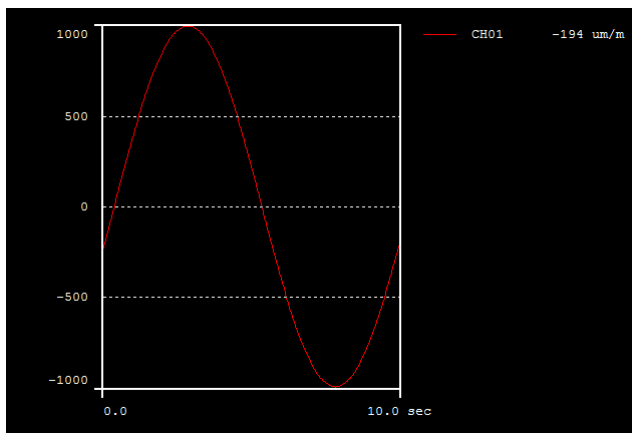
●3Graph/10CH



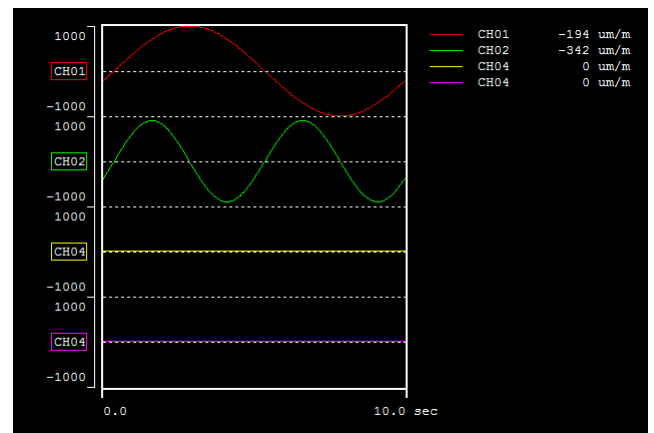
●4Graph/8CH



●1Graph/1CH



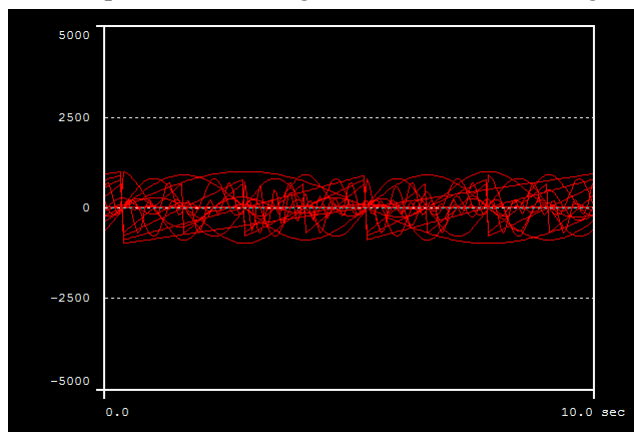
●1Graph/32CH (DIV)



●1Graph/All CHs

The 1Graph/All CHs is the time series graph which displays the all measuring channels in the same color.

The 1Graph/All CHs is designed to be used for checking whether the monitor data is exceeding the range or not.



■[General] tab

This section describes how to set the following [General] tab.

MEMO

For the X Axis Scale section and Y Axis Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Sets the number of graphs on the graph window and the number of channels on the graph.

	Graph Nos Number of data columns Number of CHs/graph	Sets the number of graphs on the graph window. (Setting range: 1 to 10) Sets the number of data columns on the graph. (Setting range: 1 to 2) Sets the number of channels to be displayed on one graph. (Setting range: 1 to 32/Graph Nos)
--	---	---

(2) X Axis Scale (sec)

Sets the scale value (sec), the number of divisions, and deci digits of the scale value on the x axis.

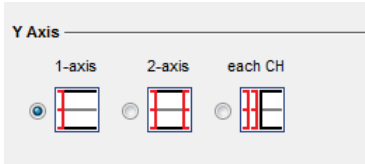
To set the each x-axis scale of multiple graphs, release a check mark from the check box next to the "Collectively set the x-axis scale of all graphs."

MEMO

On the Y-Time Graph on the MONITOR window, the minimum value of the x-axis scale value is 0 fixed.

(3) Y Axis

Sets the number of y-axes on the graph.



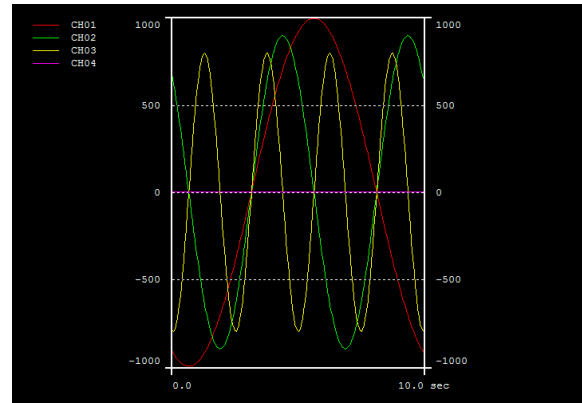
● 1-axis

The y-axis appears on the left side.



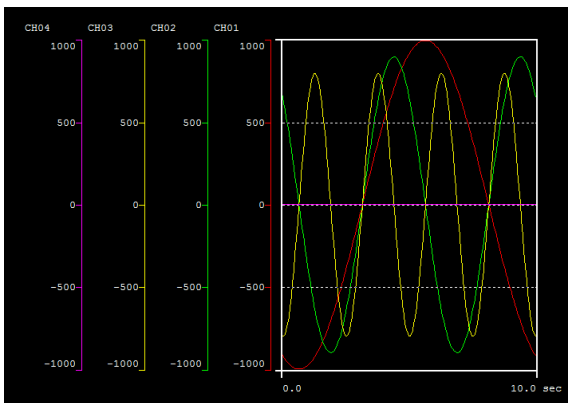
● 2-axis

The y axes appear on the right and left sides.



● Each CH

The y axes, of every channel, appear.



(4) Y Axis Scale

Sets the scale value, the number of divisions, and deci digits of the scale value on the y axis.

To set the each y-axis scale of multiple graphs, release a check mark from the check box next to the "Collectively set the y-axis scale of all graphs."

The screenshot shows the 'Y Axis Scale' dialog box. At the top, there is a checked checkbox labeled 'Collectively set the y-axis scale of all graphs.' Below this, there are two rows of input fields. The first row has a left scale of -1000 to 1000, a unit dropdown set to '0 (*****)', and a 'Divisions' dropdown set to '2'. The second row has identical settings. To the right of these fields are several icons: a grid icon, a 'Y' axis icon with a red arrow, an 'FS' icon, and a zoom icon.

When the Y Axis on the [General] tab is 2-axis, the DCS-100A is able to set the y-axis on the right side as follows.

This screenshot is similar to the previous one, but it shows the 'Left' and 'Right' axis settings. The 'Left' axis is set to -1000 to 1000 with a unit of '0 (*****)' and 2 divisions. The 'Right' axis is also set to -1000 to 1000 with a unit of '0 (*****)' and 2 divisions. The 'Right' axis section is highlighted with a red rectangular box.

(5) Thinning

(For details, see “3-3-2 To thin the data on the graph window.”)

■[Graph] tab

This section describes how to set the following [Graph] tab.

The DCS-100A displays the [Graph] tabs for the number of graphs.

MEMO

For the X Axis Scale section and Y Axis Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Sets the channels to be displayed, line color and line width on the graph.

— on the CH No.: Hides the target graph line.

Set CH button: Sets the channels to be displayed automatically.

Clear CH button: The "—" appears on every CH No.

● The Y Axis on the [General] tab is 1-axis.

● The Y Axis on the [General] tab is 2-axis.

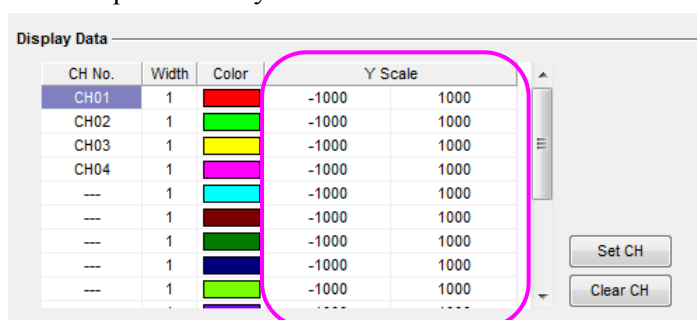


① For the y-axis on the left side

② For the y-axis on the right side

● The Y Axis on the [General] tab is each CH.

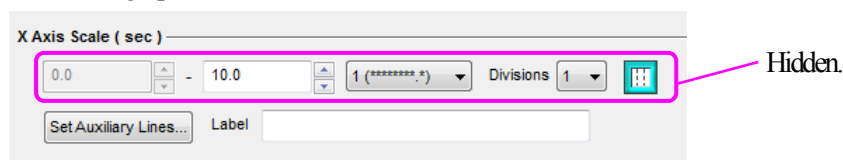
You are required to set the y-axis scale of each channel.



(2) X Axis Scale (sec)

Sets the scale value (sec), the number of divisions, and deci digits of the scale value on the x axis.

The following section is hidden when the check mark exists in the check box next to the “Collectively set the x-axis scale of all graphs.” on the [General] tab.



(3) Y Axis Scale

Sets the scale value, the number of divisions, and deci digits of the scale value on the y axis.

The following section is hidden when the check mark exists in the check box next to the “Collectively set the y-axis scale of all graphs.” on the [General] tab.



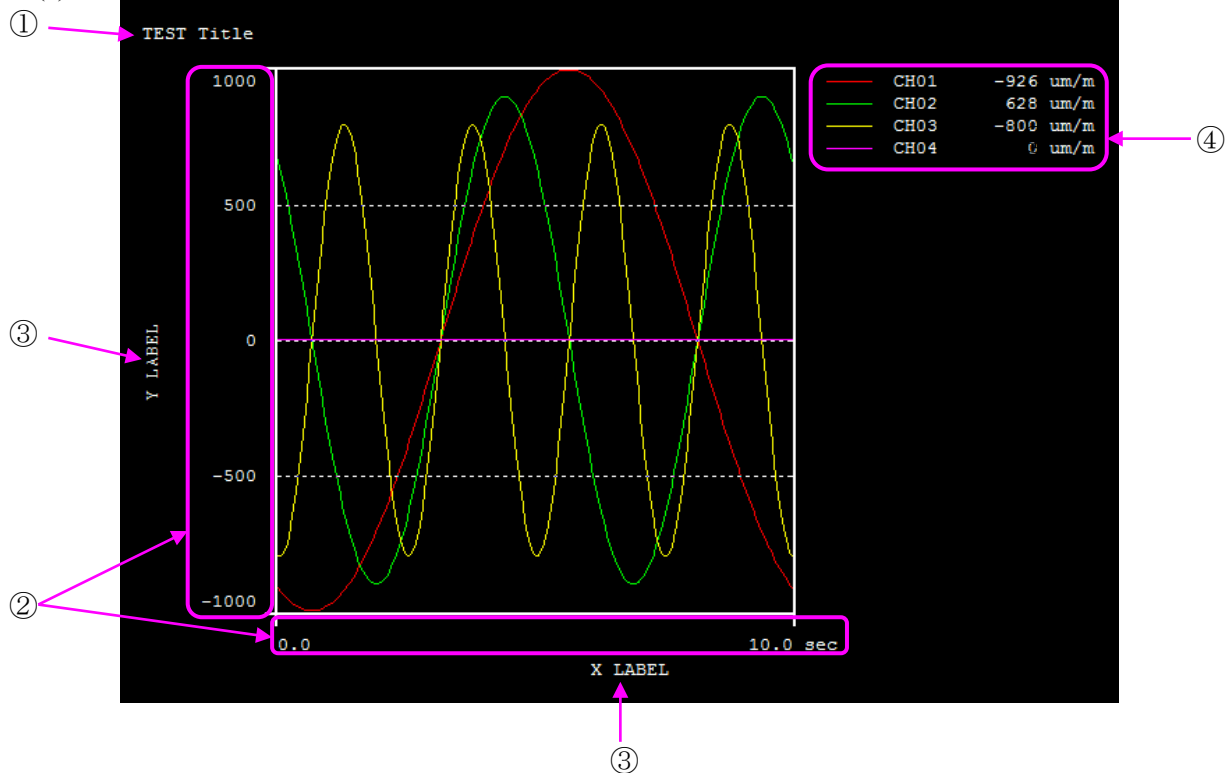
■ [Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see “3-3-3 [Details] tab.”

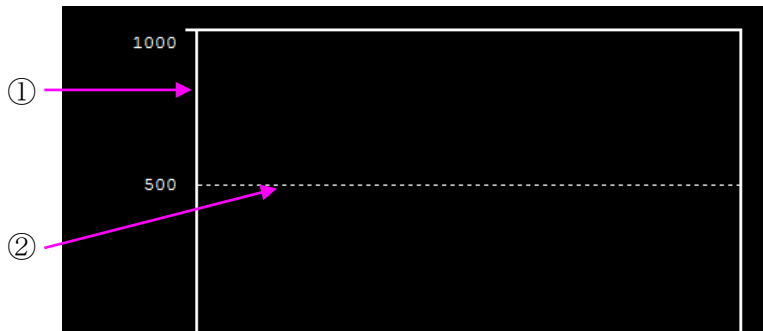
(1) Font



To set the fonts on the graph window, set them on the "Font" section.

Font			
	Font Name	Size	Color
①	Title	Courier New	10
②	Scale	Courier New	10
③	Axis Label	Courier New	10
④	Legend	Courier New	10

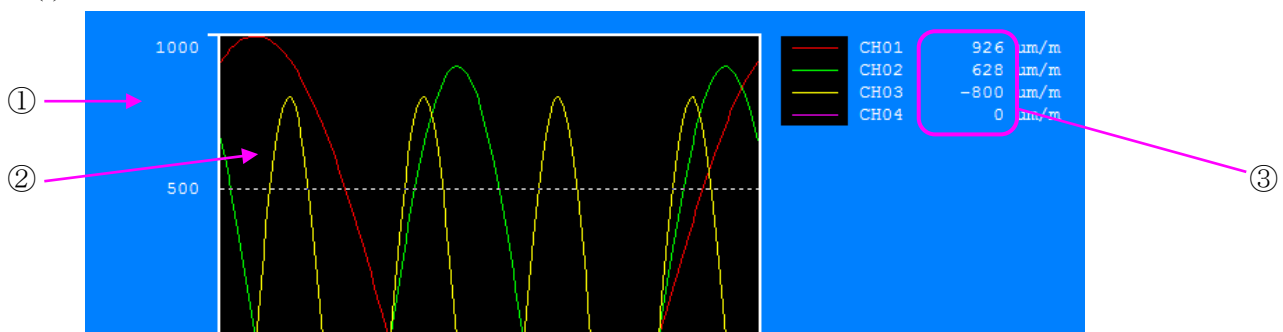
(2) Line



To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	
② Split Line	1	Dot	
Cursor	1	Solid	

(3) Color



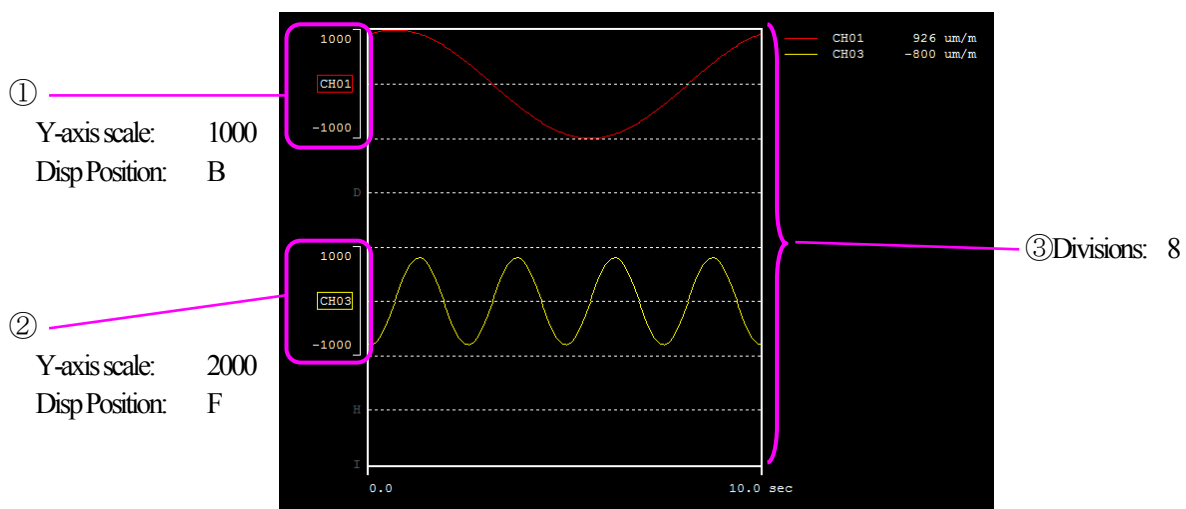
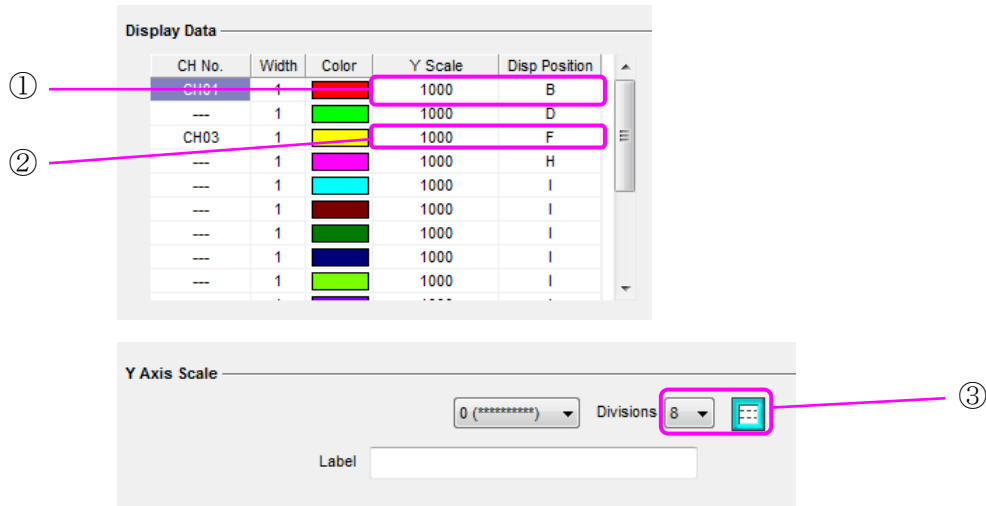
To set the colors on the graph window, set them on the "Color" section.

Color	
① Window Background	
② Graph Background	
Value (Normal)	
③ Value (Over)	

3-4-1-1 Y-Time (DIV) graph

The Y-Time (DIV) Graph is the time series graph which is able to set the y-axis scale of each channel, by moving the ZERO point position (Disp Position) of channels to the arbitrary position on the y-axis grid line.

Set the ZERO point position (Disp Position) of channels and y-axis scale on the Set Display Condition... window - [Graph] tab - Display Data section.



3-4-2 Bar graph

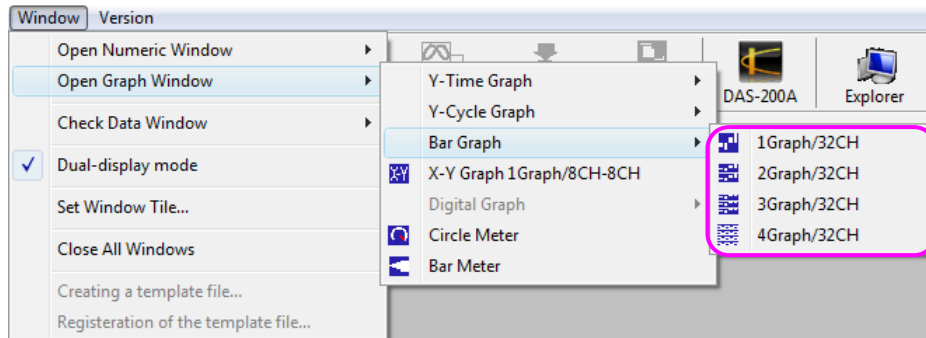
Displays the monitor data by using bars.

Single Bar Graph is able to display maximum 32 channels.

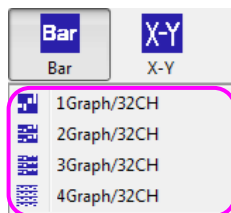
■ To display the bar graph

Open the Bar Graph window by any of the following.

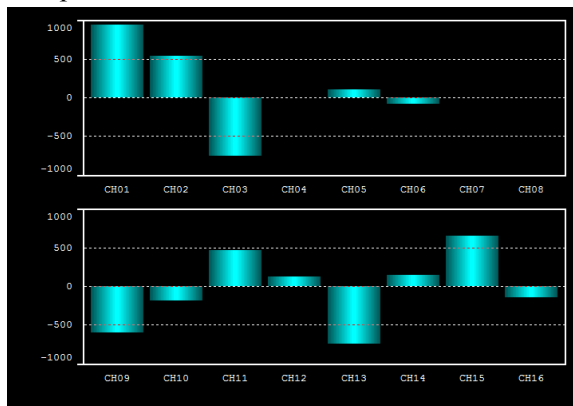
- Click the Window - Open Graph Window - Bar Graph.



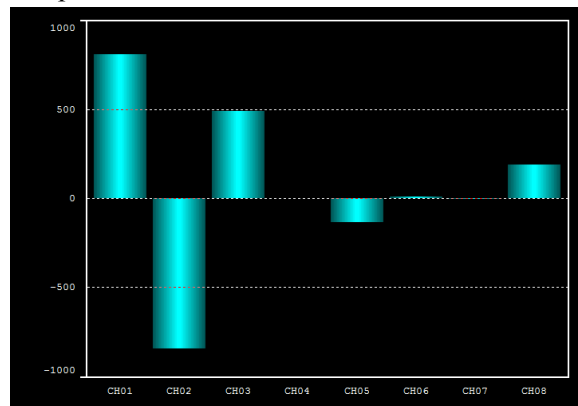
- Click the  icon from the tool bar and click the target item on the pop-up-menu.



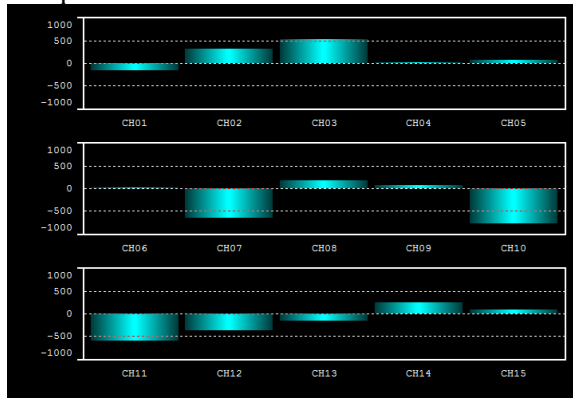
● 1Graph/32CH



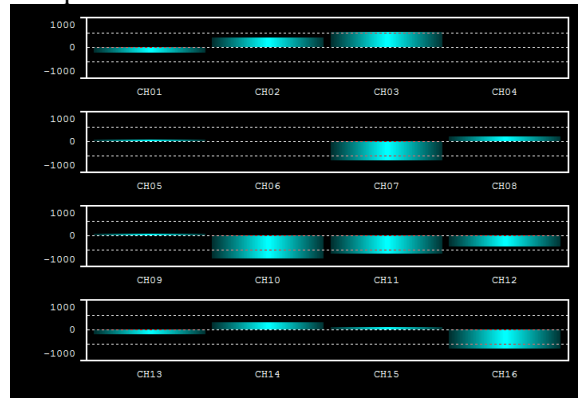
● 2Graph/32CH



● 3Graph/32CH



● 4Graph/32CH



■[Graph] tab

This section describes how to set the following [Graph] tab.

The DCS-100A displays the [Graph] tabs for the number of graphs.

Graph Details

Display Data

CH01	---	---	---
CH02	---	---	---
CH03	---	---	---
CH04	---	---	---
CH05	---	---	---
CH06	---	---	---
CH07	---	---	---
CH08	---	---	---

Set CH

Clear CH

Y Axis Scale

-1000 - 1000 0 (*****)

Divisions 2

Set Auxiliary Lines... Label

☒ With gradation.

☐ Display the peak values (maximum and minimum values).

MEMO

For the Y Axis Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Sets the channels to be displayed on the graph.

— on the CH No.: Hides the target graph line.

Set CH button: Sets the channels to be displayed automatically.

Clear CH button: The "—" appears on every CH No.

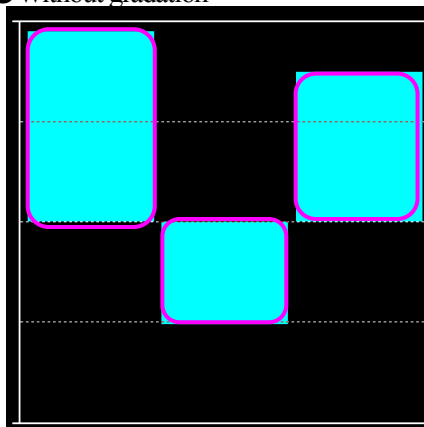
(2) Y Axis Scale

Sets the scale value, the number of divisions, and deci digits of the scale value on the y axis.

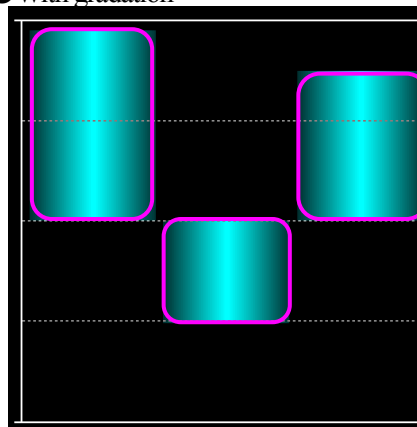
(3) Gradation

To display the bar graph with gradation color, put a check mark to the check box next to the "With gradation."

● Without gradation



● With gradation

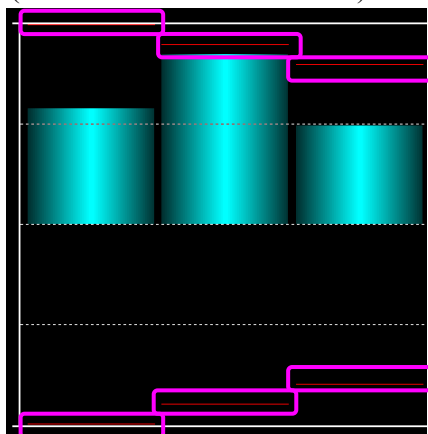


(4) Peak values (maximum and minimum values)

To display the peak value (maximum value), above the peak hold line, and peak value (minimum value), below the peak hold line, put a check mark to the check box next to the "Displays the peak values (maximum and minimum values)."

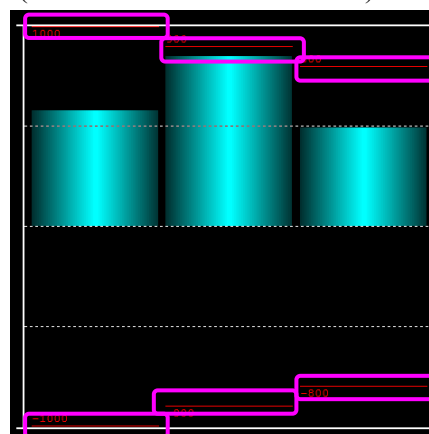
● Without the peak values

(maximum and minimum values)



● With the peak values

(maximum and minimum values)



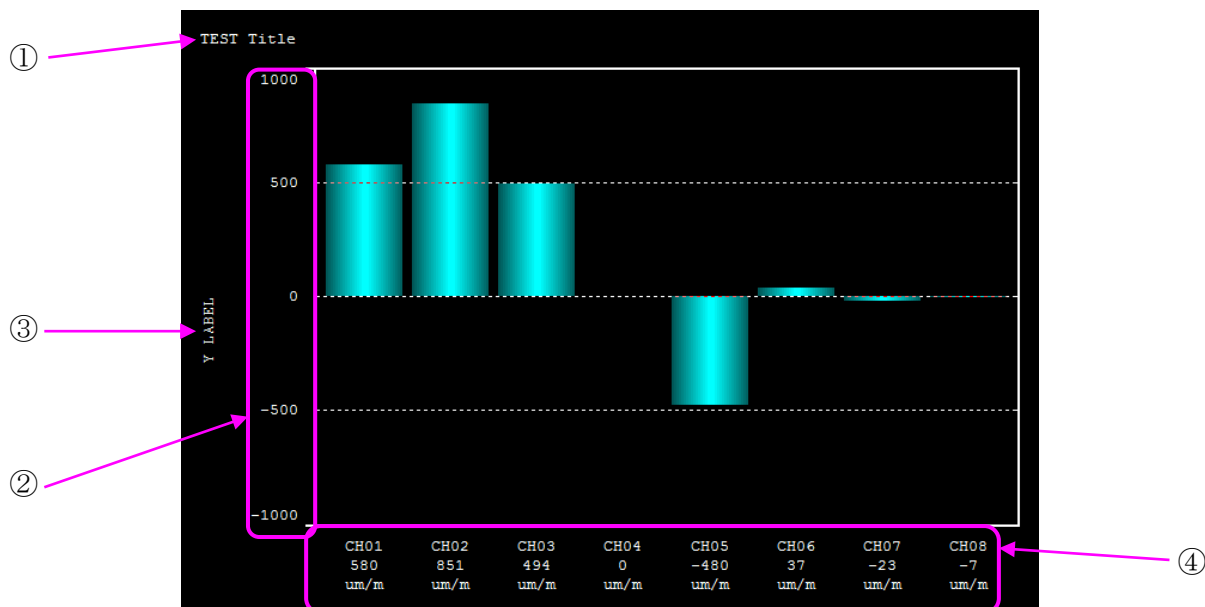
■ [Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see "3-3-3 [Details] tab."

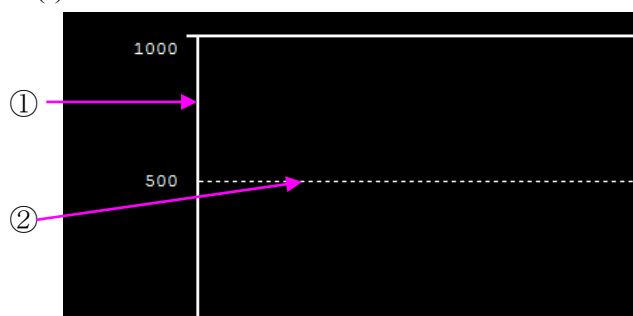
(1) Font



To set the fonts on the graph window, set them on the "Font" section.

Font			
	Font Name	Size	Color
① Title	Courier New	10	
② Scale	Courier New	10	
③ Axis Label	Courier New	10	
④ Legend	Courier New	10	

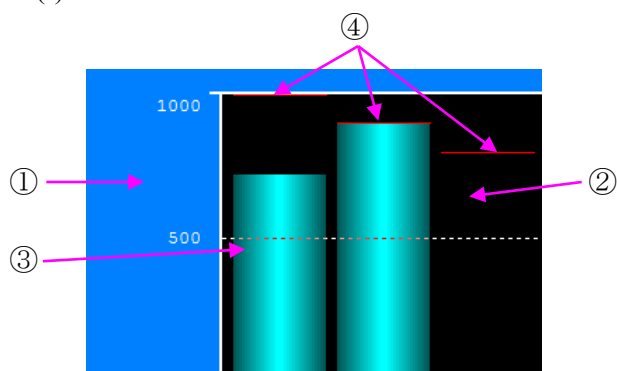
(2) Line



To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	
② Split Line	1	Dot	

(3) Color

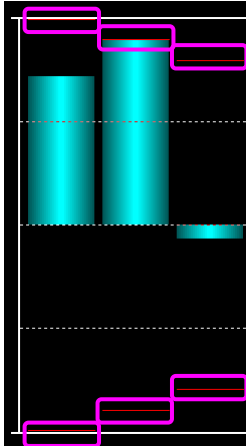


To set the colors on the graph window, set them on the "Color" section.

Color	
① Window Background	
② Graph Background	
③ Bar	
④ Bar Peak Hold Line	

3-4-2-1 Peak hold

Holds the peak values (maximum and minimum values) of the monitor data and displays the peak hold lines of the peak values (maximum and minimum values).



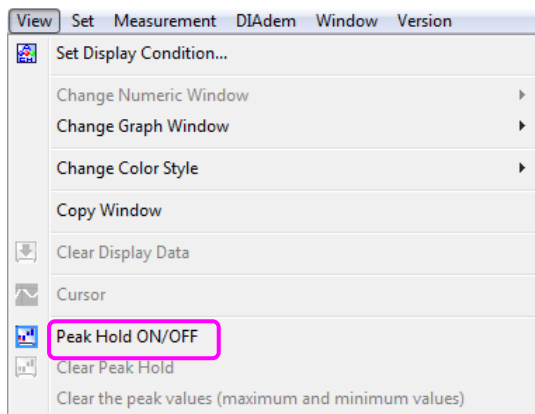
MEMO

The peak values (maximum and minimum values) indicate the maximum value and minimum value, after opening the graph window.

■ To ON or OFF the peak hold

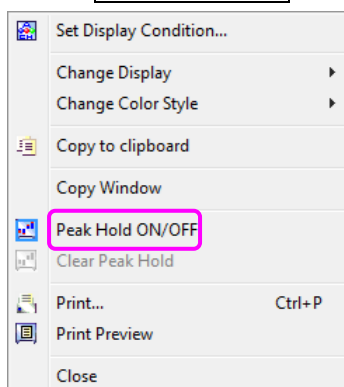
ON/OFF the peak hold value by any of the following.

- Click the View - Peak Hold ON/OFF.

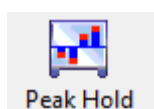


- Right-click the Graph windows to display the pop-up-menu.

Click the **Peak Hold ON/OFF** on the pop-up-menu.



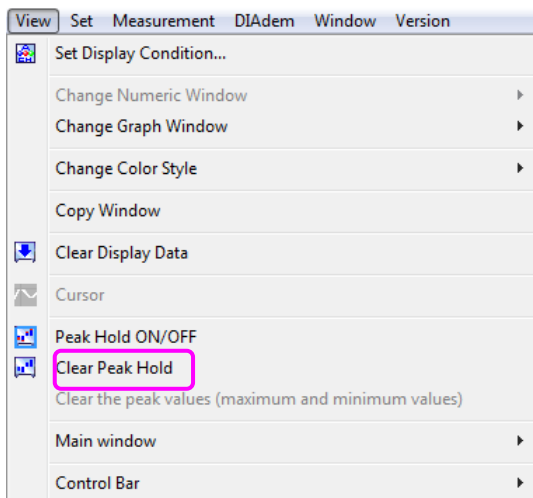
- Click the **Peak Hold** icon from the tool bar.



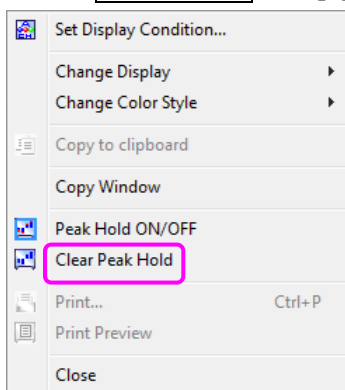
■ To clear the peak hold

Clear the peak hold value by any of the following.

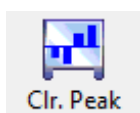
- Click the View - Clear Peak Hold.



- Right-click the Graph windows to display the pop-up-menu.
Click the **Clear Peak Hold** on the pop-up-menu.



- Click the **Clr. Peak** icon from the tool bar.



MEMO

- The DCS-100A clears the peak hold automatically when start monitoring data.
- The DCS-100A is able to clear the peak hold while monitoring data and while recording data.

3-4-3 X-Y graph

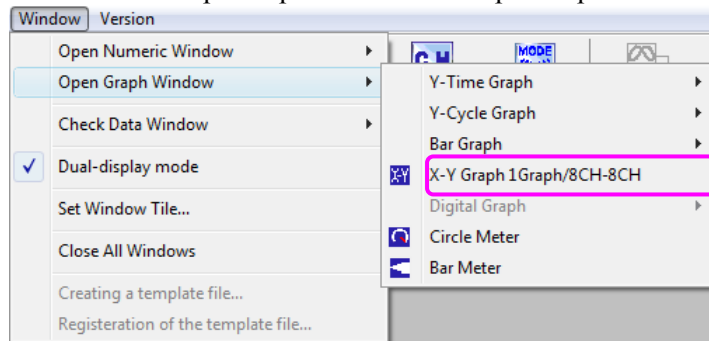
Relative graph that displays the monitor data on x-axis and y-axis.

Single graph window is able to display maximum 8 pairs (x-axis: 8 channels, y-axis: 8 channels).

■ To display the X-Y Graph

Open the X-Y Graph window by any of the following.

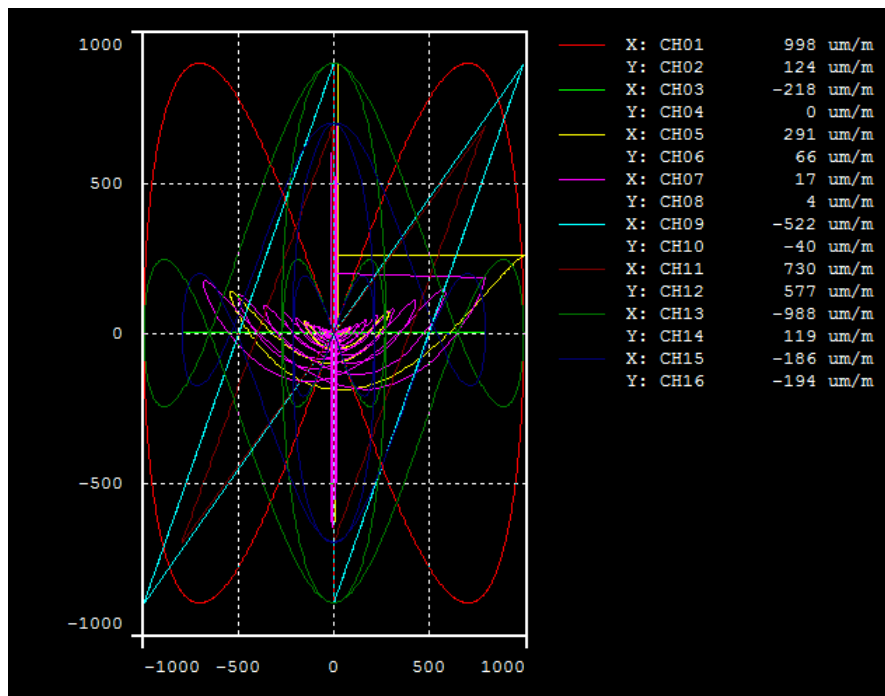
- Click the Window - Open Graph Window - X-Y Graph 1 Graph/8CH-8CH.



- Click the  icon from the tool bar.



● X-Y Graph



■[Graph] tab

This section describes how to set the following [Graph] tab.

The screenshot shows the [Graph] tab interface with the following sections:

- Display Data:** A table with columns X-CH No., Y-CH No., Width, and Color. It lists channels CH01 through CH16. CH01 is highlighted in blue. To the right of the table are buttons for "Set CH" and "Clear CH".
- X Axis Scale:** Includes input fields for scale values (-1000 to 1000), a dropdown for "0 (*****)", a "Divisions" dropdown set to 2, and icons for grid, X-axis, FS, and zoom. Below is a "Set Auxiliary Lines..." button and a "Label" input field.
- Y Axis Scale:** Similar to the X Axis Scale section, with input fields, a dropdown, a "Divisions" dropdown set to 2, and icons for grid, Y-axis, FS, and zoom. Below is a "Set Auxiliary Lines..." button and a "Label" input field.

MEMO

For the X Axis Scale section and Y Axis Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Sets the channels to be displayed, line color and line width on the graph.

— on the X-CH No.: Hides the target graph line.

— on the Y-CH No.: Hides the target graph line.

Set CH button: Sets the channels to be displayed automatically.

Clear CH button: The "—" appears on every CH No.

(2) X Axis Scale

Sets the scale value, the number of divisions, and deci digits of the scale value on the x axis.

(3) Y Axis Scale

Sets the scale value, the number of divisions, and deci digits of the scale value on the y axis.

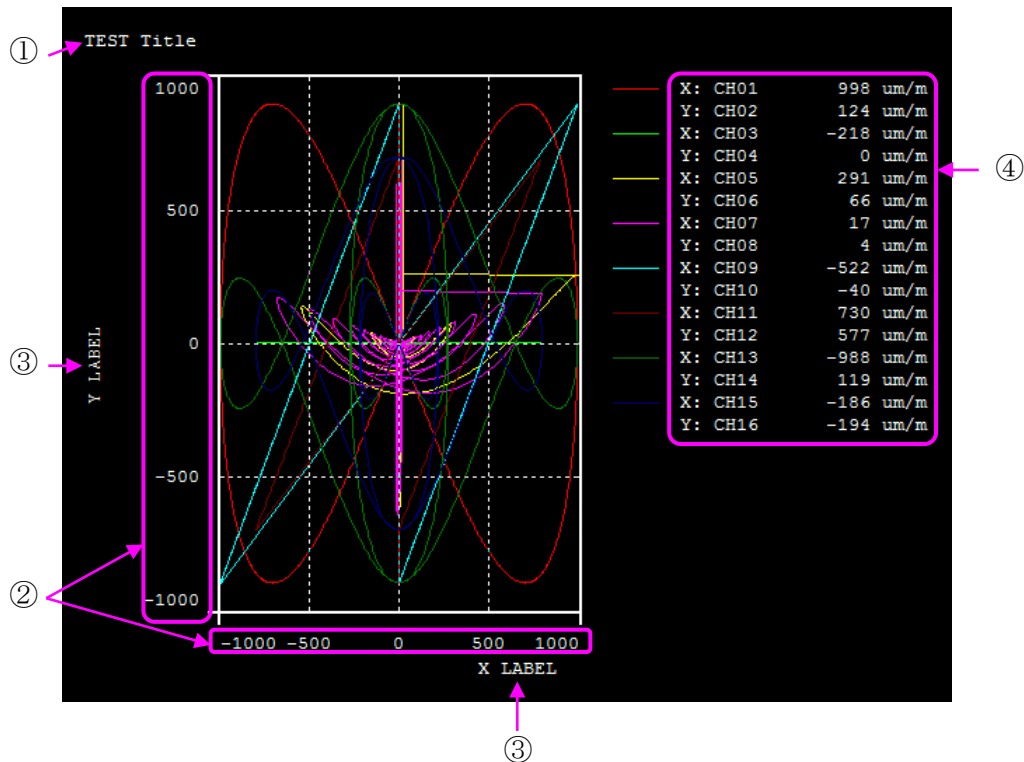
■[Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see “3-3-3 [Details] tab.”

(1) Font

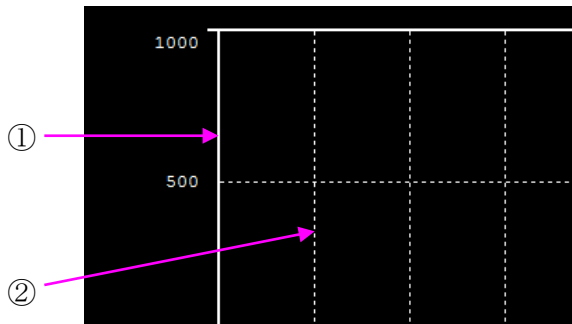


To set the fonts on the graph window, set them on the "Font" section.

Font

	Font Name	Size	Color
① Title	Courier New	10	
② Scale	Courier New	10	
③ Axis Label	Courier New	10	
④ Legend	Courier New	10	

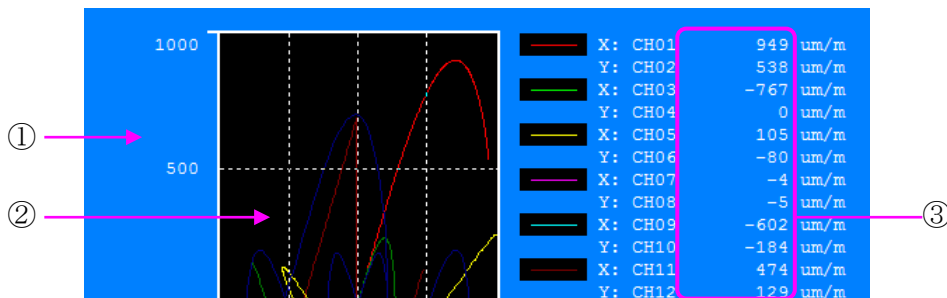
(2)Line



To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	
② Split Line	1	Dot	
Cursor	1	Solid	

(3)Color



To set the colors on the graph window, set them on the "Color" section.

Color	
① Window Background	
② Graph Background	
③ Value (Normal)	
Value (Over)	

3-4-4 Digital graph

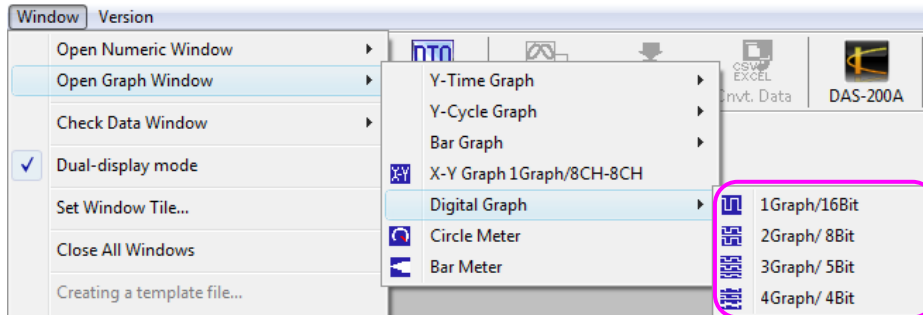
Displays the digital data in binary digit system.

Single graph window is able to display maximum 16 bits.

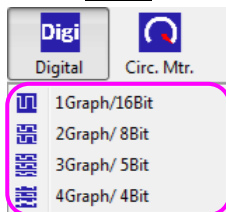
■ To display the Digital Graph

Open the Digital Graph window by any of the following.

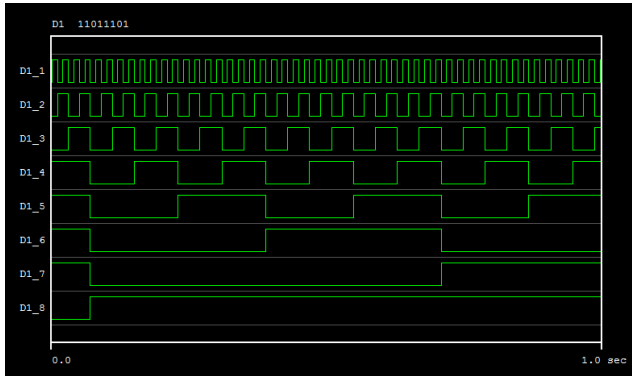
- Click the Window - Open Graph Window - Digital Graph.



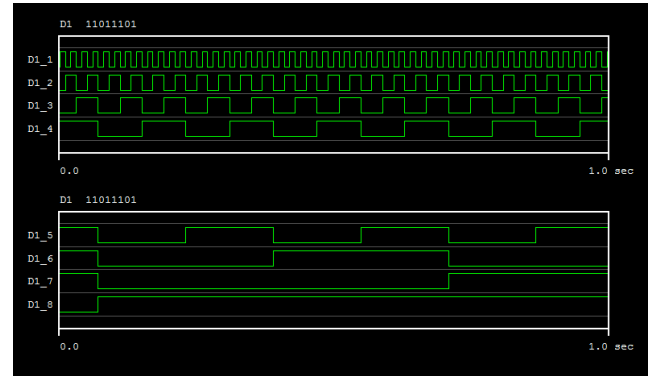
- Click the **Digital** icon from the tool bar and click the target item on the pop-up-menu.



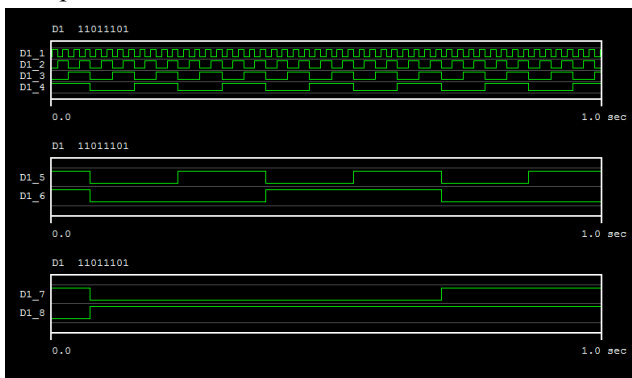
● 1Graph/16Bit



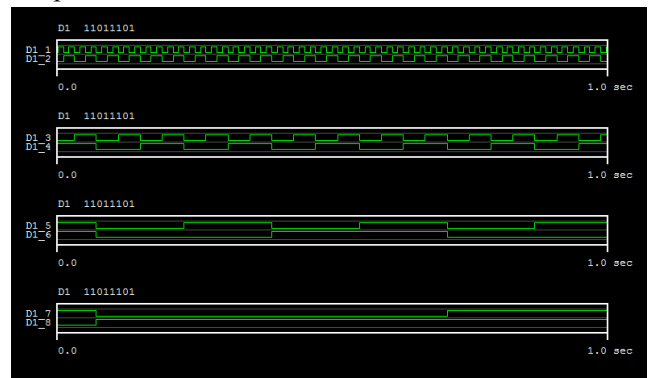
● 2Graph/8Bit



● 3Graph/5Bit



● 4Graph/4Bit



■[General] tab

This section describes how to set the following [General] tab.

General Graph Details

Thinning

☐ Automatically thin data to a window size. The number of thinning data 50

(1) Thinning

(For details, see “3-3-2 To thin the data on the graph window.”)

■[Graph] tab

This section describes how to set the following [Graph] tab.

General Graph Details

Display Data

D1

Bit Data

D1_1	---
D1_2	---
D1_3	---
D1_4	---
D1_5	---
D1_6	---
D1_7	---
D1_8	---

Set Bit

Clear Bit

X Axis Scale (sec)

0.0 - 1.0 1 (***** *) Divisions 1

Set Auxiliary Lines... Label

MEMO

For the X Axis Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Sets the channels to be displayed on the graph.

(2) Bit Data

Sets the target bit to be displayed on the graph.

—: Hides the target graph line.

Set bit button: Sets the bits to be displayed automatically.

Clear bit button: The "—" appears on every bit.

(3) X Axis Scale (sec)

Sets the scale value (sec), the number of divisions, and deci digits of the scale value on the x axis.

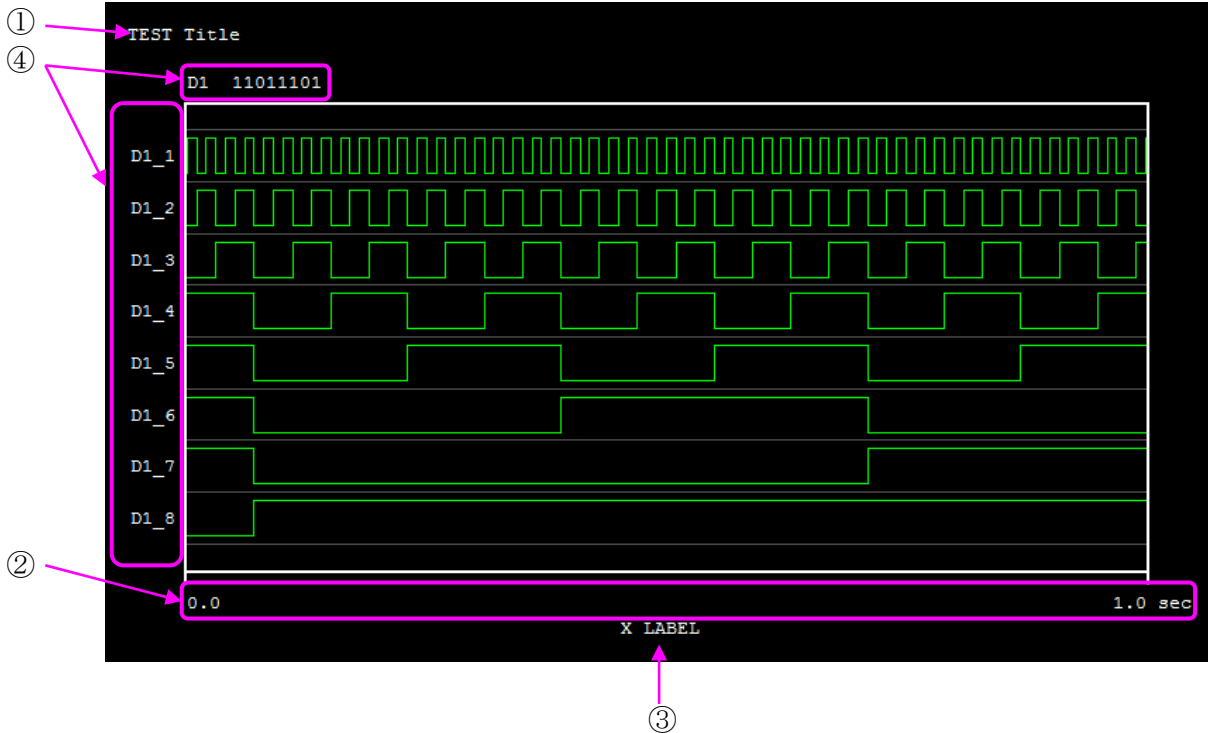
■[Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see “3-3-3 [Details] tab.”

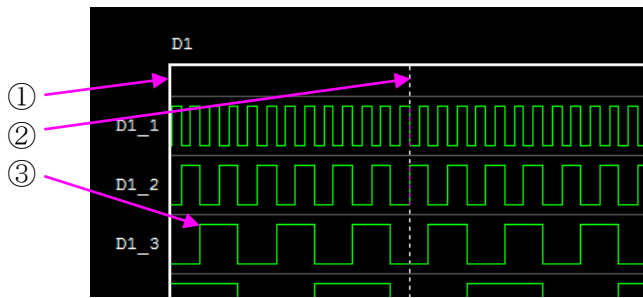
(1) Font



To set the fonts on the graph window, set them on the "Font" section.

Font			
	Font Name	Size	Color
① Title	Courier New	10	
② Scale	Courier New	10	
③ Axis Label	Courier New	10	
④ Legend	Courier New	10	

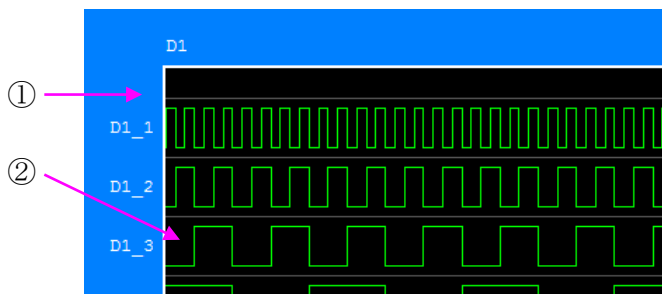
(2) Line



To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	
② Split Line	1	Dot	
③ Bit Data	1	Solid	

(3) Color



To set the colors on the graph window, set them on the "Color" section.

Color	
① Window Background	
② Graph Background	

3-4-5 Circular meter

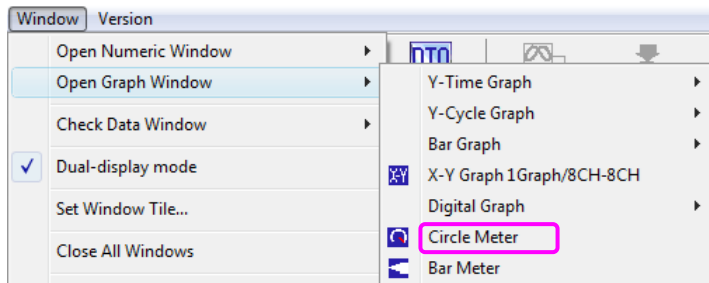
Displays the monitor data by using a circular chart.

The number of channels to be displayed is maximum 1 channel.

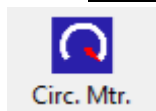
■ To display the circular meter

Open the Circular Meter window by any of the following.

- Click the Window - Open Graph Window - Circle Meter.



- Click the [Circ. Mtr.] icon from the tool bar.



■ [Meter] tab

This section describes how to set the following [Meter] tab.



MEMO

For the scale section, see “3-3-1 Scale values on the graph windows.”

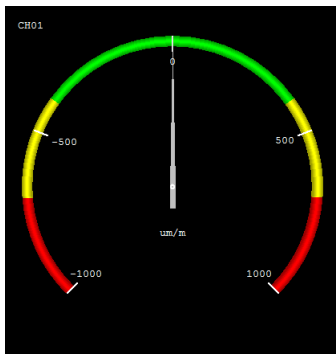
(1) Display data

Select the channel to be displayed.

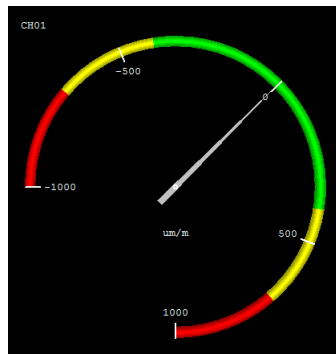
(2) Form

Select the Circular Meter form.

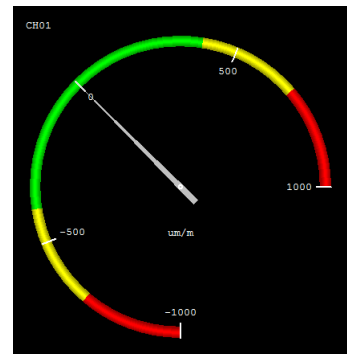
● Pattern 1 (-135° to 135°)



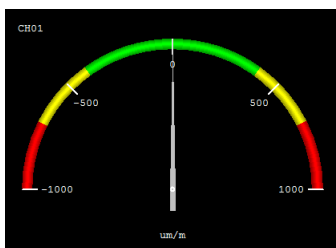
● Pattern 2 (-90° to 180°)



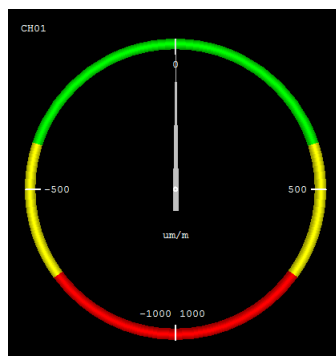
● Pattern 3 (-180° to 90°)



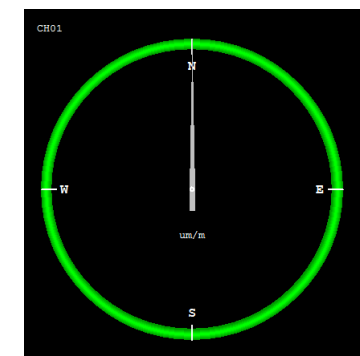
● Pattern 4 (-90° to 90°)



● 360° mode (-180° to 180°)



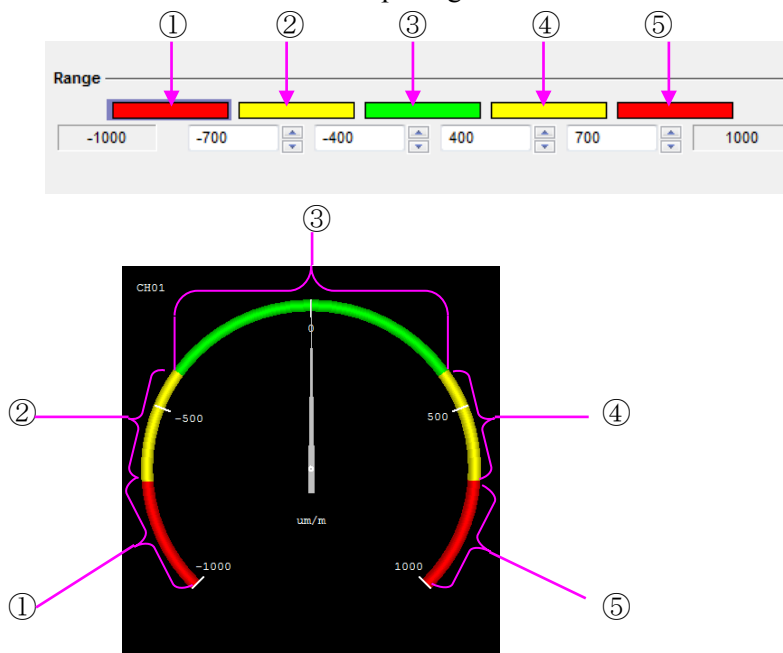
● Compass mode



(3) Range

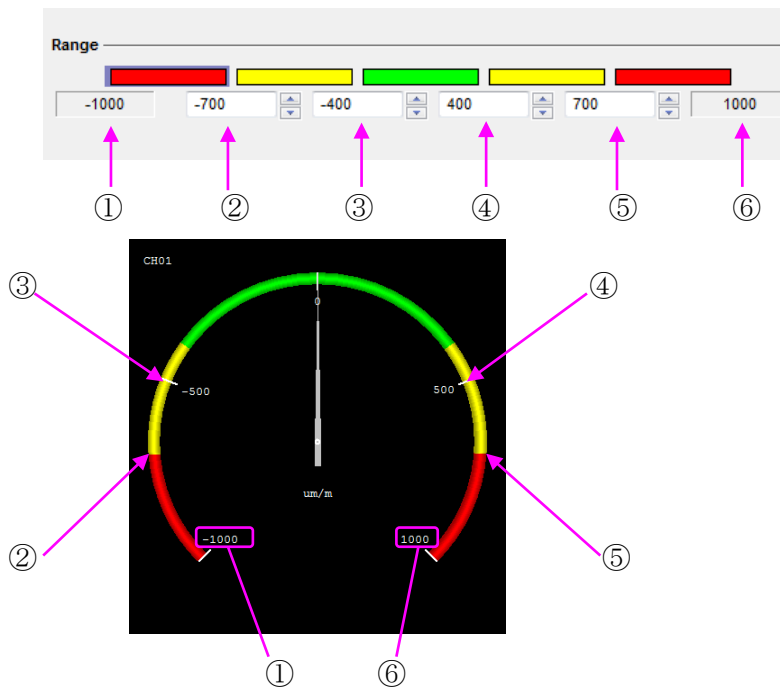
Select the colors and scale values on the Circular Meter.

● The colors and Circular Meter are corresponding as follows.



Double-click the target box to display the Color window.
Select the target item from the Color window.

● The scale values and Circular Meter are corresponding as follows.



To change the scale values, input the numeric values.

Note that every scale value should be larger than the scale value, located on the left side.

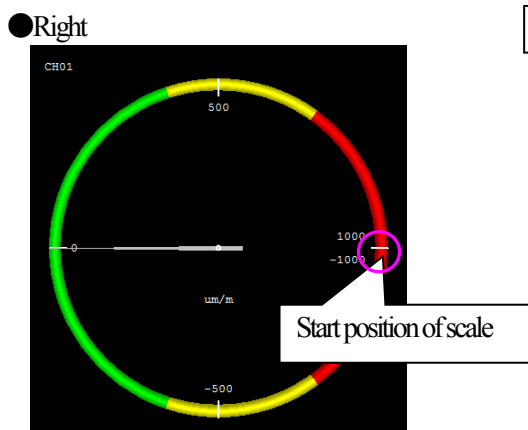
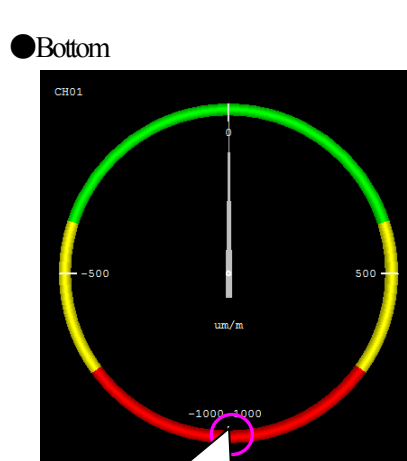
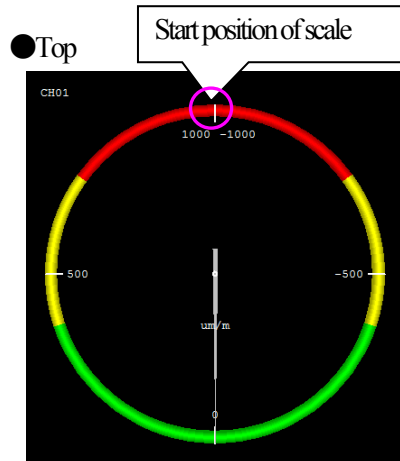
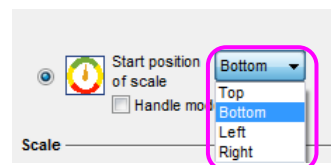
■ To set the 360° mode

This section describes how to set the 360° mode.

(1) Start position of scale

Select the Start position of scale from the right list.

Top/Bottom/Right/Left



(2) Handel mode

The Handel mode is a useful function for displaying the steering angle.

To display the Circular Meter in the handle mode, put a check mark to the check box next to the "Handle mode."

The Handle mode changes the scales automatically after the monitor data exceeds the scale range.

[Example]

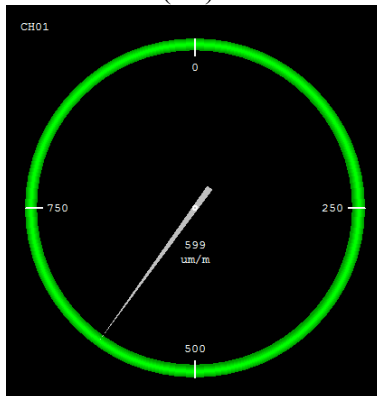
Suppose the Circular Meter is as follows.

Start position of scale: Top

Scale values: 0 to 1000

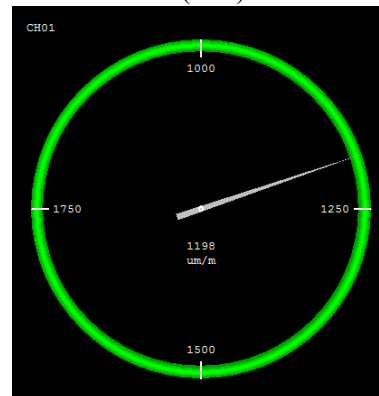
Divisions: 4

● $0 < \text{Monitor data (599)} < 1000$



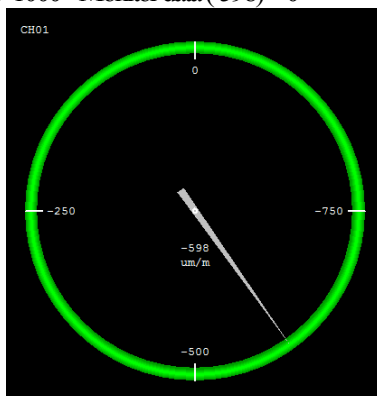
Scale values: "0 to 1000"

● $1000 < \text{Monitor data (1198)} < 2000$



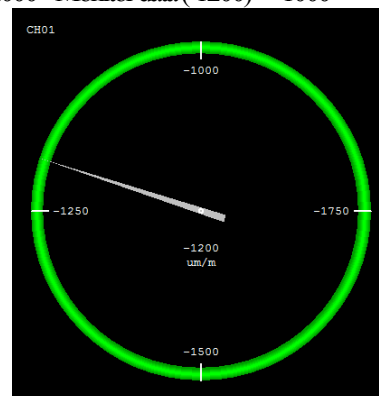
Scale values: "1000 to 2000"

● $-1000 < \text{Monitor data (-598)} < 0$



Scale values: "-1000 to 0"

● $2000 < \text{Monitor data (-1200)} < -1000$



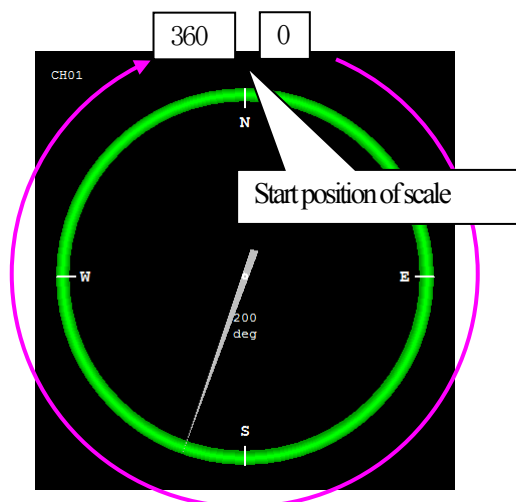
Scale values: "-2000 to -1000"

(3) Compass mode

The Compass mode is an useful function for displaying the bearing data.

The Compass mode indicates 0° (North), 90° (East), 180° (South), and 270° (West).

The scale values are 0 to 360 (fixed).



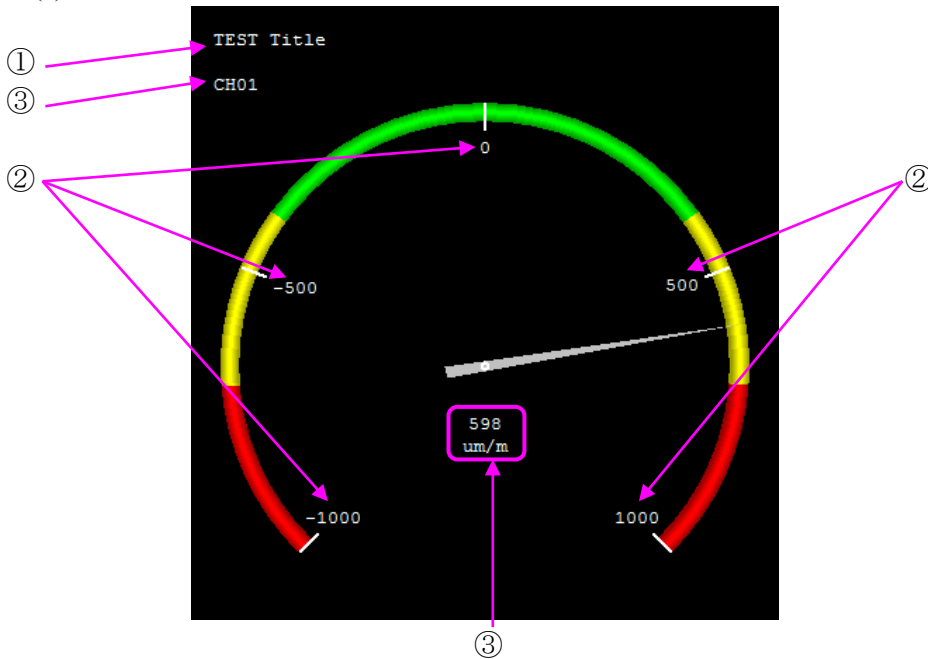
■[Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see “3-3-3 [Details] tab.”

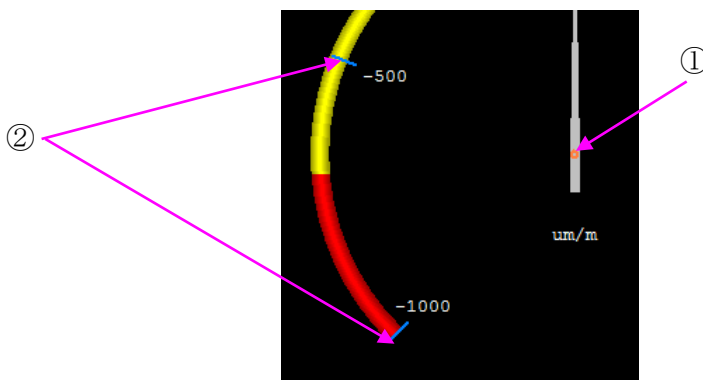
(1) Font



To set the fonts on the graph window, set them on the "Font" section.

Font			
	Font Name	Size	Color
① Title	Courier New	10	
② Scale	Courier New	10	
③ Legend	Courier New	10	

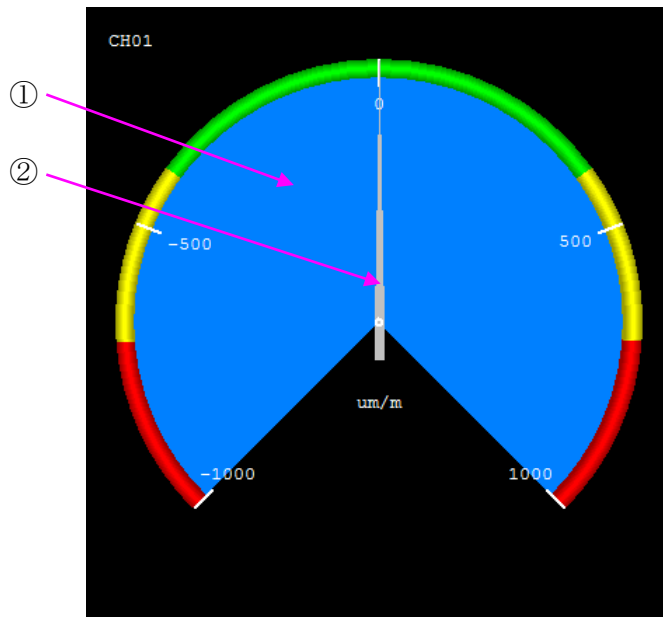
(2) Line



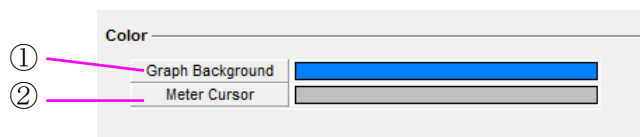
To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	Orange
② Split Line	2	Solid	Blue

(3) Color



To set the colors on the graph window, set them on the "Color" section.



3-4-6 Bar meter

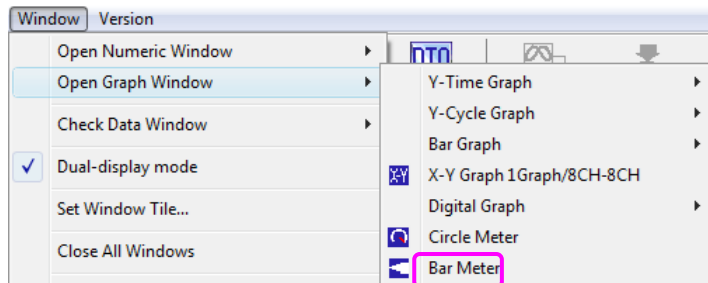
Displays the monitor data by using bar charts.

The number of channels to be displayed is maximum 1 channel.

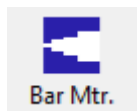
■ To display the Bar Meter

Open the Bar Meter window by any of the following.

- Click the Window - Open Graph Window - Bar Meter.



- Click the **Bar Mtr** icon from the tool bar.



■ [Meter] tab

This section describes how to set the following [Meter] tab.



MEMO

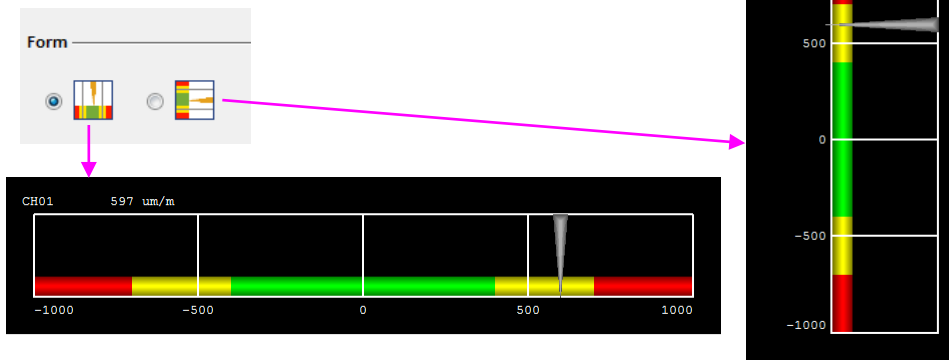
For the Scale section, see “3-3-1 Scale values on the graph windows.”

(1) Display data

Select the channel to be displayed.

(2) Form

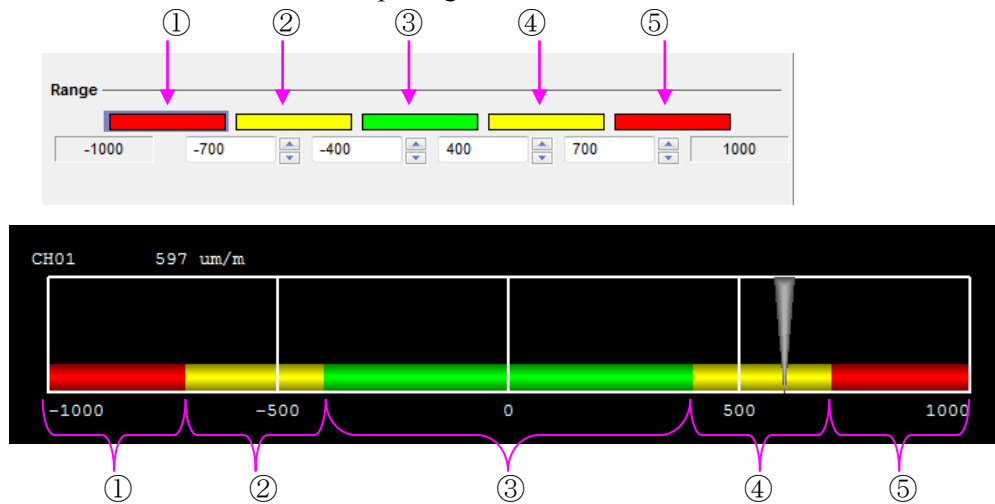
Select the Bar Meter form.



(3) Range

Select the colors and scale values on the Circular Meter.

● The colors and Circular Meter are corresponding as follows.



Double-click the target box to display the Color window. Select the target item from the Color window.

● The scale values and Circular Meter are corresponding as follows.



To change the scale values, input the numeric values.

Note that every scale value should be larger than the scale value, located on the left side.

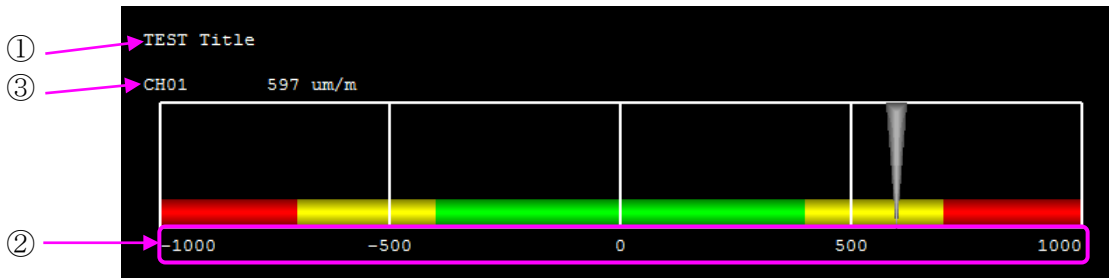
■[Details] tab

This section describes how to set the following [Details] tab.

MEMO

For details, see 3-3-3 [Details] tab.”

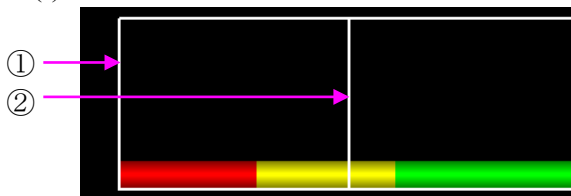
(1) Font



To set the fonts on the graph window, set them on the "Font" section.

Font			
	Font Name	Size	Color
① Title	Courier New	10	
② Scale	Courier New	10	
③ Legend	Courier New	10	

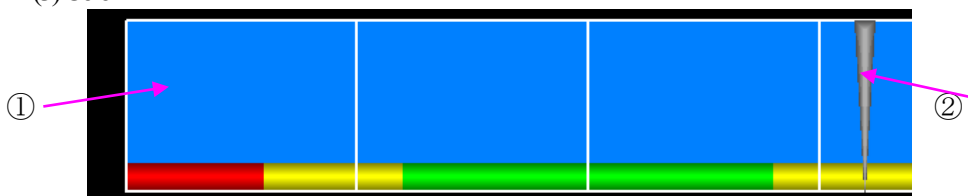
(2) Line



To set the lines on the graph window, set them on the "Line" section.

Line			
	Width	Style	Color
① Frame Line	2	Solid	
② Split Line	2	Solid	

(3) Color



To set the colors on the graph window, set them on the "Color" section.

Color	
① Graph Background	
② Meter Cursor	

3-5 Numeric windows

3-5-1 Monitor data

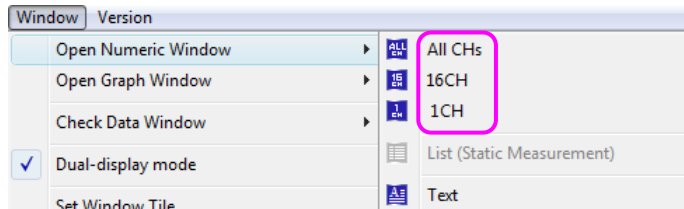
Displays the monitor data in numeric values.

Single numeric window (monitor data) is able to display maximum 100 channels.

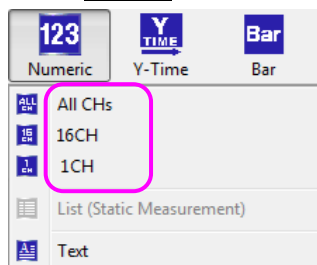
■ To display the monitor data

Open the Numeric window (monitor data) by any of the following.

- Click the Window - Open Numeric Window.



- Click the **Numeric** icon from the tool bar and click the target item on the pop-up-menu.



● All CHs

Displays the all measuring channels.

CH01	-194 um/m	CH17	-194 um/m
CH02	-342 um/m	CH18	-342 um/m
CH03	-562 um/m	CH19	-562 um/m
CH04	0 um/m	CH20	-700 um/m
CH05	6 um/m	CH21	6 um/m
CH06	4 um/m	CH22	4 um/m
CH07	-70 um/m	CH23	-70 um/m
CH08	7 um/m	CH24	7 um/m
CH09	938 um/m	CH25	938 um/m
CH10	788 um/m	CH26	788 um/m
CH11	602 um/m	CH27	602 um/m
CH12	353 um/m	CH28	353 um/m
CH13	-179 um/m	CH29	-179 um/m
CH14	-243 um/m	CH30	-243 um/m
CH15	-7 um/m	CH31	-7 um/m
CH16	696 um/m	CH32	696 um/m

● 16CH

Displays the 16 channels of the measuring channels.

CH01	-194 um/m
CH02	-342 um/m
CH03	-562 um/m
CH04	0 um/m
CH05	6 um/m
CH06	4 um/m
CH07	-70 um/m
CH08	7 um/m
CH09	938 um/m
CH10	788 um/m
CH11	602 um/m
CH12	353 um/m
CH13	-179 um/m
CH14	-243 um/m
CH15	-7 um/m
CH16	696 um/m

● 1CH

Displays the 1 channel of the measuring channels.

CH01	-194 um/m
------	-----------

■ [General] tab

This section describes how to set the following [Numeric] tab.

The screenshot shows the 'Numeric' tab with the 'Details' sub-tab selected. The 'Disp Data' section has 'Row' set to 8 and 'Col' set to 1. A table lists channels CH01 through CH08. To the right are 'Set CH' and 'Clear CH' buttons with a double arrow icon. The 'Display Style' section shows three options: 'Line' (selected), 'Grid', and 'Max/Min', each with a preview of the display style. Below these are two checkboxes: 'Modify the moving font display size to a window size.' (checked) and 'The measured data is displayed in seven-segment display characters.' (unchecked).

(1) Display data (Row and Col)

Select the number of channels to be displays and channels to be displayed.

After selecting the number of channel to be displayed on the Row box and Col box, select the channels to be displayed.

This screenshot is similar to the previous one, but the 'Row' and 'Col' dropdown menus are highlighted with a pink rectangle to indicate they should be selected.

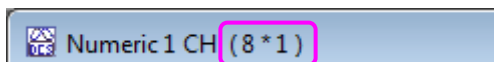
● Numeric window (monitor data) Row: 8, Col: 2

CH01	-194 um/m	CH09	938 um/m
CH02	-342 um/m	CH10	788 um/m
CH03	-562 um/m	CH11	602 um/m
CH04	0 um/m	CH12	353 um/m
CH05	6 um/m	CH13	-179 um/m
CH06	4 um/m	CH14	-243 um/m
CH07	-70 um/m	CH15	-7 um/m
CH08	7 um/m	CH16	696 um/m

● Numeric window (monitor data) Row: 8, Col: 4

CH01	-194 um/m	CH09	938 um/m	CH17	-194 um/m	CH25	938 um/m
CH02	-342 um/m	CH10	788 um/m	CH18	-342 um/m	CH26	788 um/m
CH03	-562 um/m	CH11	602 um/m	CH19	-562 um/m	CH27	602 um/m
CH04	0 um/m	CH12	353 um/m	CH20	-700 um/m	CH28	353 um/m
CH05	6 um/m	CH13	-179 um/m	CH21	6 um/m	CH29	-179 um/m
CH06	4 um/m	CH14	-243 um/m	CH22	4 um/m	CH30	-243 um/m
CH07	-70 um/m	CH15	-7 um/m	CH23	-70 um/m	CH31	-7 um/m
CH08	7 um/m	CH16	696 um/m	CH24	7 um/m	CH32	696 um/m

The Row and Col appear on the title bar.



(2) Display data (Set CH button and Clear CH button)

Set CH button: Sets the channels to be displayed automatically.

You are able to change the vertical/horizontal format by pressing the button, located on the right of the Set CH button.



: Vertical format



: Horizontal format

[Example 1]

Channels in the vertical format

	1	2	3	4
1	---	---	---	---
2	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---

↓

	1	2	3	4
1	CH01	CH09	CH17	CH25
2	CH02	CH10	CH18	CH26
3	CH03	CH11	CH19	CH27
4	CH04	CH12	CH20	CH28
5	CH05	CH13	CH21	CH29
6	CH06	CH14	CH22	CH30
7	CH07	CH15	CH23	CH31
8	CH08	CH16	CH24	CH32

Set CH
Clear CH

Click

Channels in the vertical format

[Example 2]

Channels in the horizontal format

	1	2	3	4
1	---	---	---	---
2	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---

↓

	1	2	3	4
1	CH01	CH02	CH03	CH04
2	CH05	CH06	CH07	CH08
3	CH09	CH10	CH11	CH12
4	CH13	CH14	CH15	CH16
5	CH17	CH18	CH19	CH20
6	CH21	CH22	CH23	CH24
7	CH25	CH26	CH27	CH28
8	CH29	CH30	CH31	CH32

Set CH
Clear CH

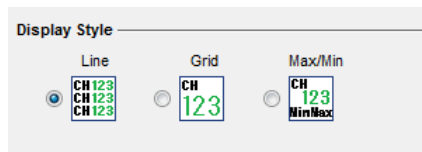
Click

Channels in the horizontal format

Clear CH button: The "—" appears on every CH No.

(3) Display Style

Select the display style.



● Line

Displays the Legends of every channel in the horizontal format.

CH01	-194 um/m	CH09	938 um/m
CH02	-342 um/m	CH10	788 um/m
CH03	-562 um/m	CH11	602 um/m
CH04	0 um/m	CH12	353 um/m
CH05	6 um/m	CH13	-179 um/m
CH06	4 um/m	CH14	-243 um/m
CH07	-70 um/m	CH15	-7 um/m
CH08	7 um/m	CH16	696 um/m

● Grid

Displays the Legends of every channel in boxes.

CH01	-194 um/m	CH05	6 um/m
CH02	-342 um/m	CH06	4 um/m
CH03	-562 um/m	CH07	-70 um/m
CH04	0 um/m	CH08	7 um/m

● Max/Min

Displays the Legends and peak values (maximum and minimum values) of every channel in boxes.

The DCS-100A clears the peak values (maximum and minimum values) at the following timing.

- When start monitoring data.
- When clicking the View - Clear the peak values (maximum and minimum values).

CH01	-194 um/m MIN -1000 MAX 1000	CH05	6 um/m MIN -546 MAX 1000
CH02	-342 um/m MIN -900 MAX 900	CH06	4 um/m MIN -662 MAX 900
CH03	-562 um/m MIN -800 MAX 800	CH07	-70 um/m MIN -685 MAX 800
CH04	0 um/m MIN 0 MAX 0	CH08	7 um/m MIN -646 MAX 700

MEMO

The peak values (maximum and minimum values) indicate the maximum value and minimum value, after opening the numeric window.

(4) Modify the moving font display size to a window size.

To zoom in/zoom out the Legend font size automatically in accordance with the window size, put a check mark to the check box next to the "Modify the moving font display size to a window size."

● With a check mark

CH01	-194	um/m
CH02	-342	um/m
CH03	-562	um/m
CH04	0	um/m
CH05	6	um/m
CH06	4	um/m
CH07	-70	um/m
CH08	7	um/m

● Without a check mark

The Legends appear based on the font size, pre-set on the [Details] tab.

When all of the information in that window cannot be seen at the same time, the scroll bar appears.

Use the scroll bar to see the hidden information.

CH01	-194	um/m
CH02	-342	um/m
CH03	-562	um/m
CH04	0	um/m
CH05	6	um/m
CH06	4	um/m
CH07	-70	um/m
CH08	7	um/m

(5) The measured data is displayed in seven-segment display characters.

To display the monitor data in digital numeric values, put a check mark to the check box next to the "The measured data is displayed in seven-segment display characters."

After putting a check mark, the numerical value (normal) appears green automatically.

CH01	-194	um/m
CH02	-342	um/m
CH03	-562	um/m
CH04	0	um/m

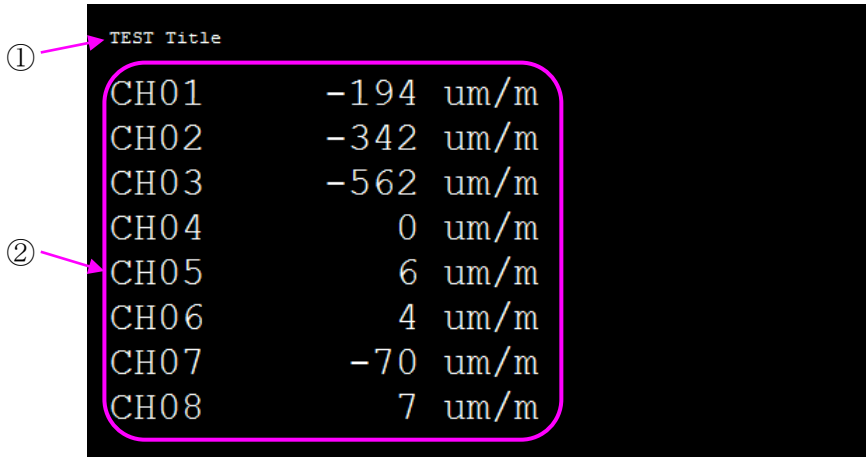
■ [Details] tab

This section describes how to set the following [Details] tab.

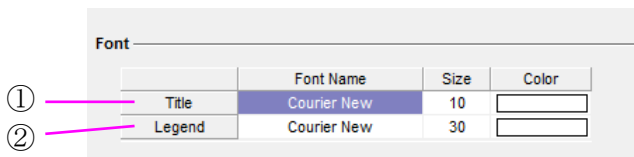
MEMO

For details, see “3-3-3 [Details] tab.”

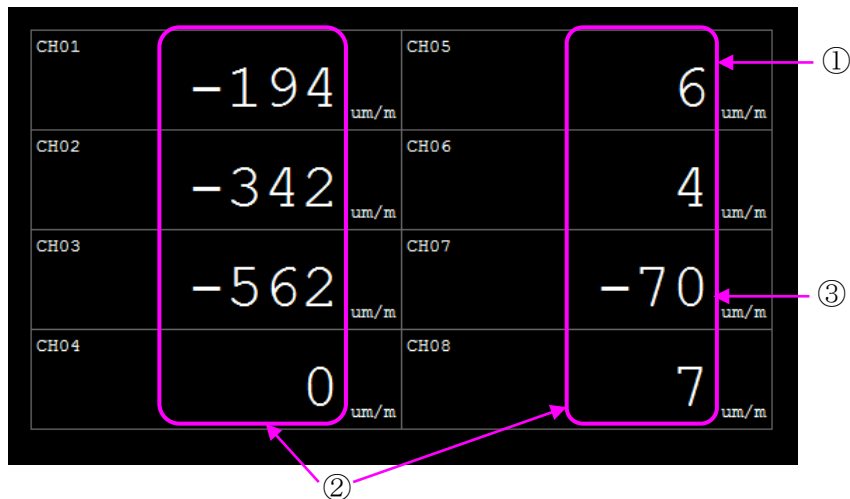
(1) Font



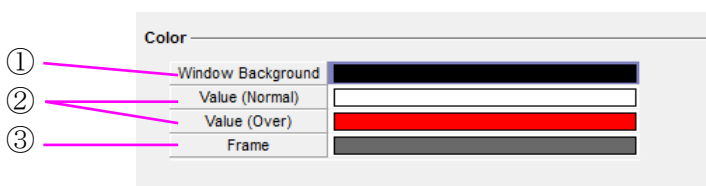
To set the fonts on the numeric window, set them on the "Font" section.



(2) Color



To set the colors on the numeric window, set them on the "Color" section.



3-5-1-1 Save the display values (CSV Format File)

Immediately after monitoring the data, save the display values into the CSV format file.

CSV format file names are specified as shown below.

[KS2 file name] Numeric [Date and time].CSV

• Display Style : Line,Grid

CH No. , CH Name, Unit, Numeric
CH01, CH01_Memo, um/m, -0. 085693359375
CH02, CH02_Memo, um/m, -0. 92919921875
CH03, CH03_Memo, um/m, 0. 353515625
CH04, CH04_Memo, um/m, 0. 0081787109375

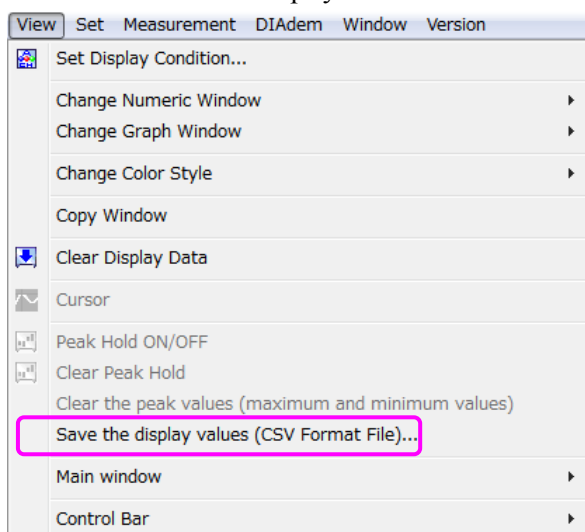
• Display Style : Max/Min

CH No. , CH Name, Unit, Numeric, Max, Min
CH01, CH01-Memo, um/m, -0. 085693359375, 1. 7874755859375, -1. 7586669921875
CH02, CH02-Memo, um/m, -0. 92919921875, 15. 6363525390625, -12. 815673828125
CH03, CH03-Memo, um/m, 0. 353515625, 2. 2547607421875, -2. 16455078125
CH04, CH04-Memo, um/m, 0. 0081787109375, 2. 0029296875, -1. 7601318359375

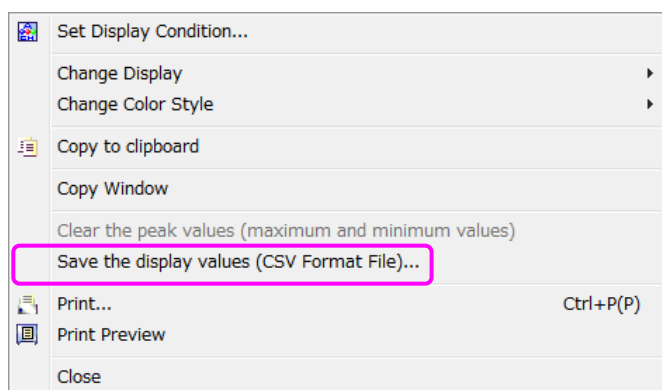
■ To save the display values

Save the display values by any of the following

- Click the View - Save the display values...



- Right-click the Numeric windows to display the pop-up-menu.
Click the Save the display values... on the pop-up-menu.



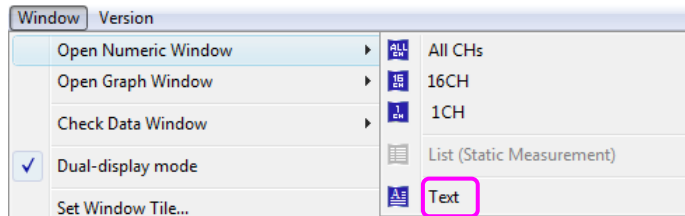
3-5-2 Text

Displays the arbitrary character string, current time, etc..

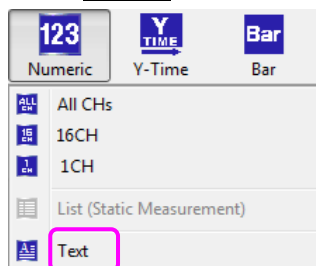
■ To display the text

Open the Text window by any of the following

- Click the Window - Open Numeric Window - Text.



- Click the **Numeric** icon from the tool bar and click the **Text** on the pop-up-menu.



● Arbitrary character string

Testing
13:00-14:00

● Data file name

TEST0000.KS2

● Date and time

2014/10/27 16:21:18

● Measuring status

Monitoring

■ [Disp] tab

This section describes how to set the following [Disp] tab.

(1) Display data

Select the target text format from the following.

—:	Hides the character string.
Arbitrary character string	The entered character string (Maximum 100 characters, 6 rows)
Data File Name	Data file name
Data File Title	File title of the data file name
Date	Date (Year/month/day)
Time	Time (Hour: minute: second)
Date and Time	Date and time (Year/month/day hour: minute: second)
Measurement state	Measuring status (Stop, Monitoring, Recording, Pausing) in large characters

(2) Image File

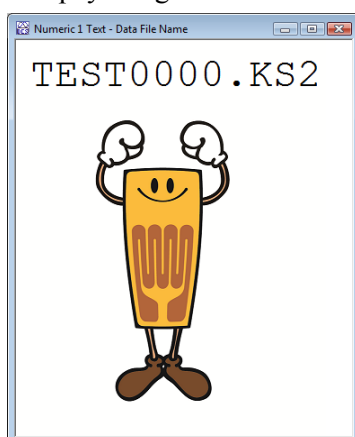
Displays the image file (file format: BMP) on the text window.

To display the image file (file format: BMP) on the text window, put a check mark to the check box next to the "Display a image file." Click the **Browse** button to display the Open File window.

Select the image file (file format: BPM) on the Open File window.

The image file appears below the text.

In the following example, the Disp Data is "Data File Name" with a check mark in the check box next to the "Display a image file."



(3) Modify the moving font display size to a window size.

To zoom in/zoom out the Legend font size automatically in accordance with the window size, put a check mark to the check box next to the "Modify the moving font display size to a window size."

(4) Modify the moving image display size to a window size.

To zoom in/zoom out the image size automatically in accordance with the window size, put a check mark to the check box next to the "Modify the moving image display size to a window size."

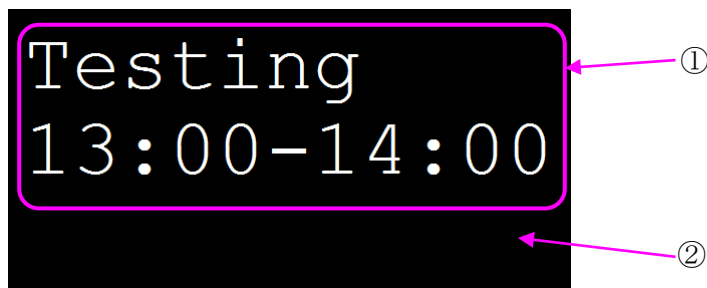
■[Details] tab

This section describes how to set the following [Details] tab.

MEMO

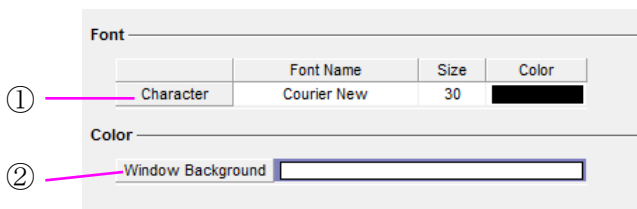
For details, see "3-3-3 [Details] tab."

(1) Font and Color



To set the fonts on the numeric window, set them on the "Font" section.

To set the colors on the numeric window, set them on the "Color" section.



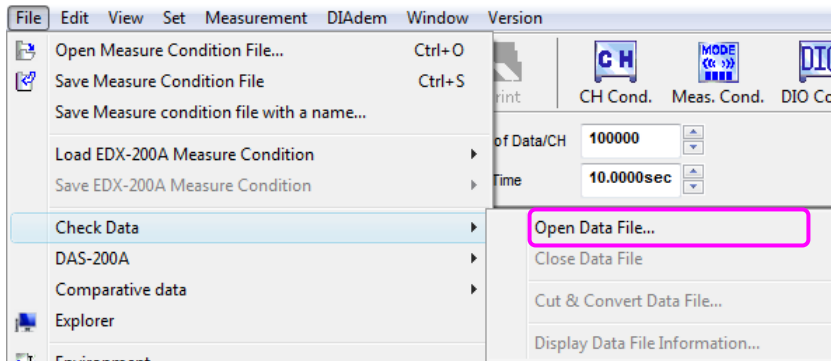
4. Checking data

This section describes how to reproduce the recorded data file (extension: KS2).

4-1 To open the data file

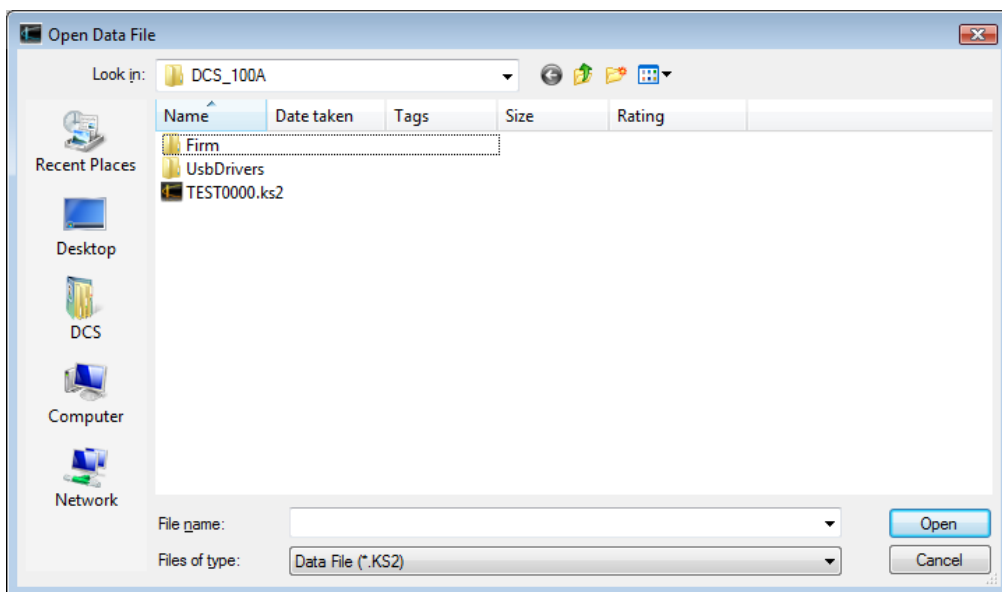
■ To select the data file

(1) Click the File - Check Data - Open Data File....



(2) The Open Data File window appears.

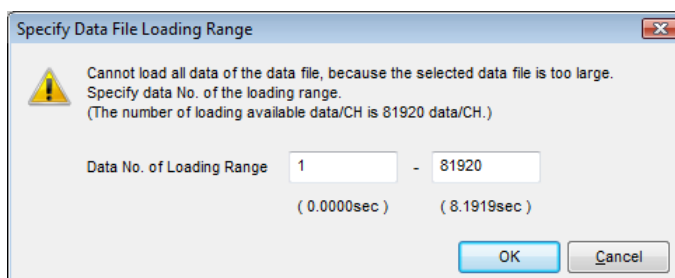
Select the data file and click the **Open** button.



NOTE

When the data file size is larger than 10 MB, since the DCS-100A is not able to load all the data files, the following window appears.

Specify the data to be loaded on the window.

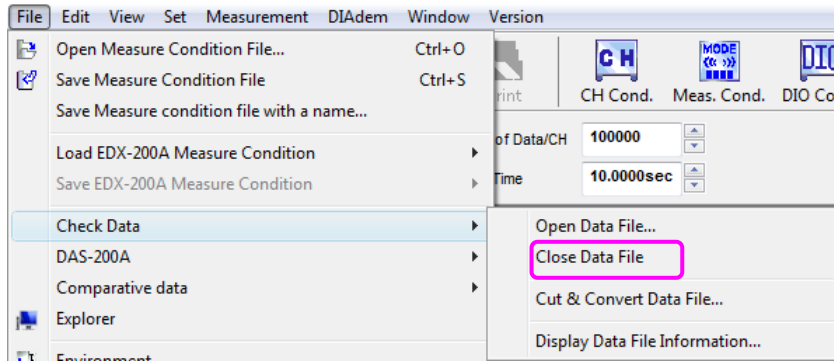


4-2 To Close the data file

This section describes how to close the data files and all confirmation windows.

■ To close the Data File

Click the File - Check Data - Close Data File.



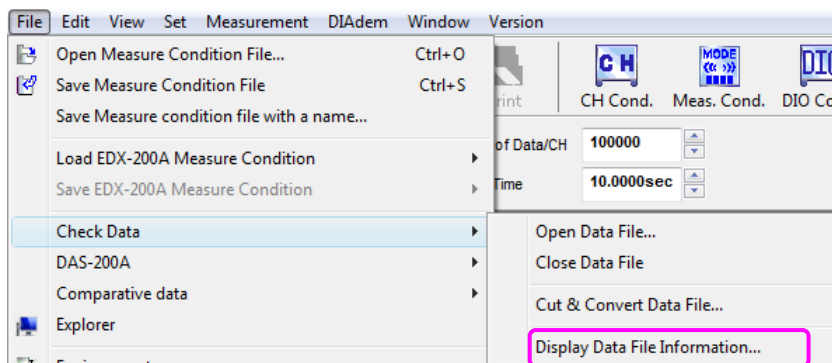
4-3 To display the file information

This section describes the file information of the data file.

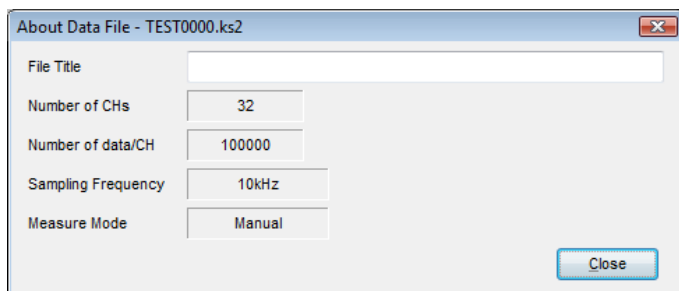
The file information includes the file title, the number of recording channels, the number of data, sampling frequency, and measuring mode.

■ To display the file information

(1) Click the File - Check Data - Display Data File Information....



(2)The Data File Information window appears.

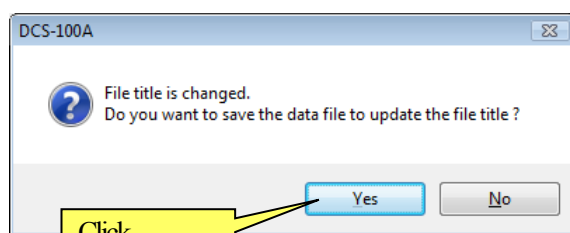


MEMO

You are able to edit the file title on the Data File Information window.

After editing the tile title, click the **Close** button.

The following message appears. Click the **Yes** button.



4-4 Graph windows

The Graph window displays the recorded data in the data file.

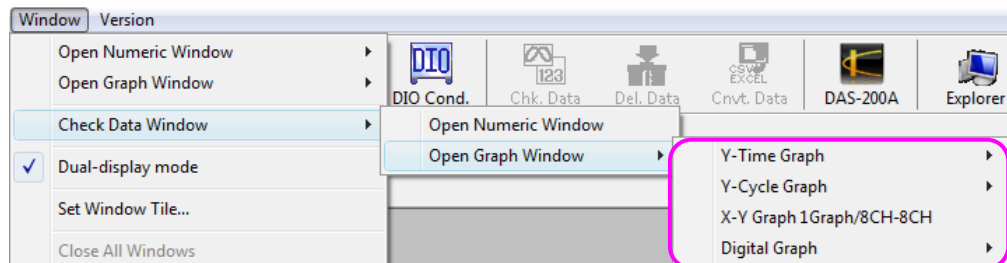
The Checking data operation is able to display the following graph windows.

- Y-Time Graph (1Graph to 4Graph, 1Graph/32DIV)
- X-Y Graph
- Digital Graph

The operations are the same as that of the monitor window. For details, see “3-4 GRAPH WINDOWS.”

■ To display the graph window

After opening the data file, click the Window - Check Data Window - Open Graph Window.



4-4-1 Maximum value/minimum value/average value

The Y-Time Graph is able to display the maximum value/minimum value/average value within the window.

■ To display the Maximum value/Minimum value/Average value

(1) Activate the Graph windows.

(2) Operate the DCS-100A by any of the following.

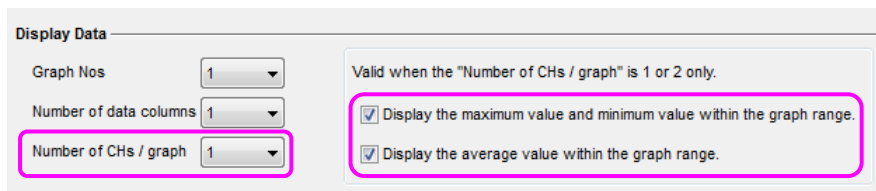
- Click the View - Set Display Condition....
- Right-click the Graph windows to display the pop-up-menu.
Click the [Set Display Condition...] on the pop-up-menu.
- Click the [Disp Cond] icon from the tool bar.
- Double-click the Graph windows.

(3) The Set Display Condition... window appears.

Click the [General] tab.

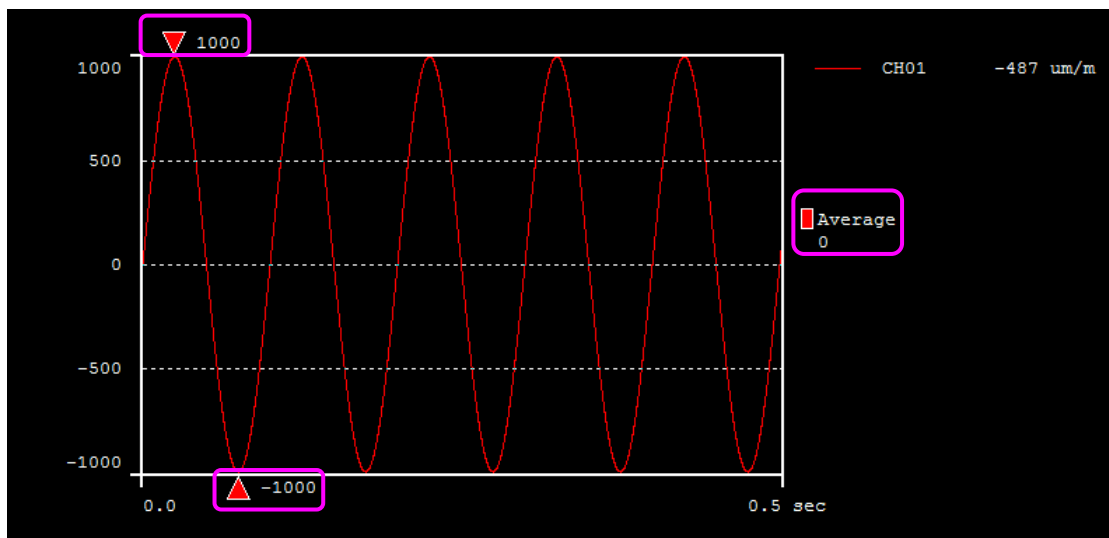
Make sure the Number of CHs/graph is 1 or 2.

Put a check mark to the check box next to the "Display the maximum value and minimum value within the graph range." and "Display the average value within the graph range.".



(4) Click the [OK] button to close the Set Display Condition... window.

The maximum value/minimum value/average value appear on the graph window.



NOTE

The DCS-100A displays the maximum value/minimum value/average value on the Y-Time Graph only.

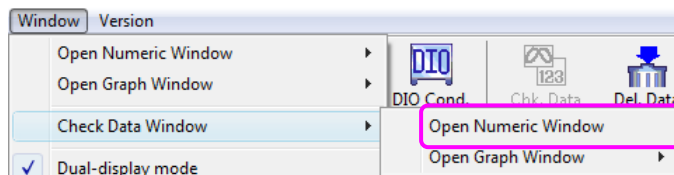
4-5 Numeric windows

The Numeric window displays the recorded data in the data file, in numeric values, in the list view.
The Numeric window displays the recorded 500 data on each tab.

1 - 5000		5001 - 10000	10001 - 15000	15001 - 20000	20001 - 25000	25001 - 30000		
Data No.	Time(sec)	CH01	CH02	CH03	CH04			
		um/m	um/m	um/m	um/m			
1	0.0000	0	0	0	4			
2	0.0001	13	23	40	4			
3	0.0002	25	45	80	4			
4	0.0003	38	68	121	4			
5	0.0004	50	90	161	4			
6	0.0005	63	113	201	4			
7	0.0006	75	136	240	4			
8	0.0007	88	158	280	4			
9	0.0008	100	181	320	4			
10	0.0009	113	203	359	4			
11	0.0010	126	226	398	4			
12	0.0011	138	248	437	4			
13	0.0012	151	270	475	4			
14	0.0013	163	293	514	4			
15	0.0014	176	315	551	4			
16	0.0015	188	337	589	4			
17	0.0016	201	359	626	4			

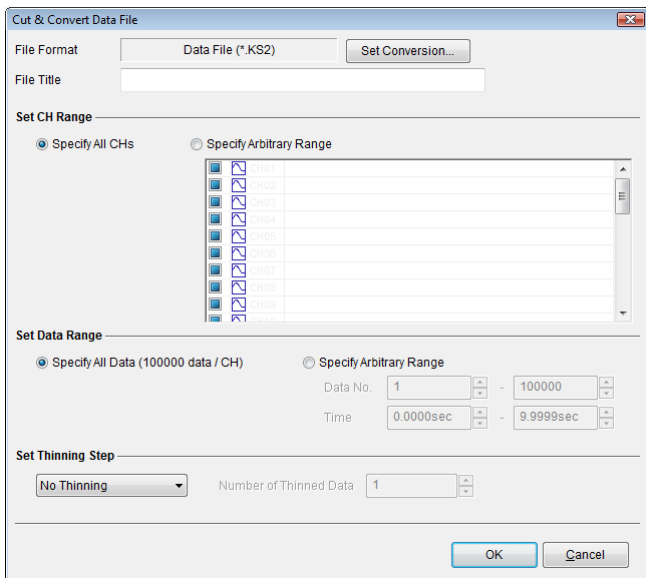
■ To display the numeric window

After opening the data file, click the Window - Check Data Window - Open Numeric Window.



4-6 To extract/convert data file

This section describes how to extract data files and convert data files into CSV format files or Microsoft Excel format files.



■ To display the Cut & Convert Data File window

Click the File - Check Data - Cut & Convert Data File....

■ Conditions

(1) File Format

Select the file format.

Measured data file (*.KS2)	KYOWA standard format file You are able to load the files with the Kyowa's Data Analysis Software (DAS-200A) or DIAdem.
CSV format file (*.CSV)	Comma-delimited text file You are able to load the files with the text editor or spreadsheet software.
XLS format file (*.XLS)	Microsoft Excel 97-2003 format file
XLSX format file (*.XLSX)	Microsoft Excel format file
RPCIII format file (*.rsp)	MTS RPCIII format file
CAN/analog data conversion format file (*.KS2)	Converts the recorded CAN data (E4A format file) into the analog data file. The E4A format file is a CAN data file, recorded on the ECAN-40A/EGPC-40A.

(2) File Title

Set a file title. The number of character string is maximum 40.

(3) Set CH Range

Set the channel range.

“Specify All CHs” Cuts/converts all channels.

“Specify Arbitrary Range” Cuts/converts the specified channels.

(4) Set Data Range

Set the data range.

“Specify All Data” Cuts/converts all data.,

“Specify Arbitrary Range” Cuts/converts the specified data.

(5) Set Thinning Step

Set the data thinning step.

“No thinning” No thinning

“Simple Thinning” Saves data after the specific interval (number of thinned data).

Data No.	Number of Thinned data: 1	Number of Thinned data: 2
1	✓	✓
2		
3	✓	
4		✓
5	✓	
6		
7	✓	✓
8		
9	✓	
10		✓

Data to be saved: ✓

“Average Thinning” Averages the number of thinned data for saving

[Example]

Suppose the data has A, B, C, D, E, and F.

Number of Thinned Data: 2 (A+B)/2, (C+D)/2, (E+F)/2

Number of Thinned Data: 3 (A+B+C)/3, (D+E+F)/3

5. Function windows

This section describes the functions that can be performed on the Numeric/Graph window.

5-1 To change windows

This section describes how to change the active Numeric windows/Graph windows into the other windows.

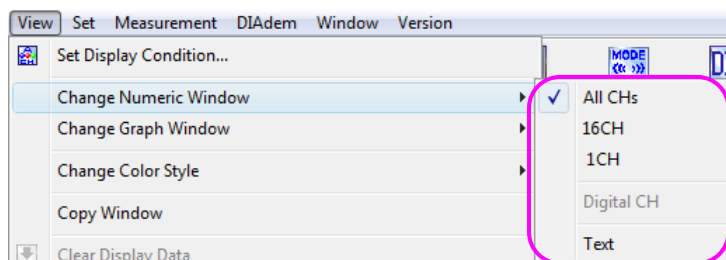
■ To change windows

(1) Activate the Numeric windows/Graph windows.

(2) Operate the DCS-100A by any of the following.

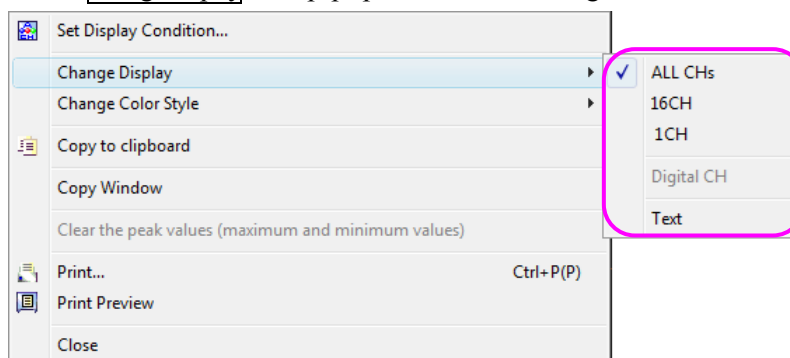
● Numeric windows

- Click the View - Change Numeric window - target item.



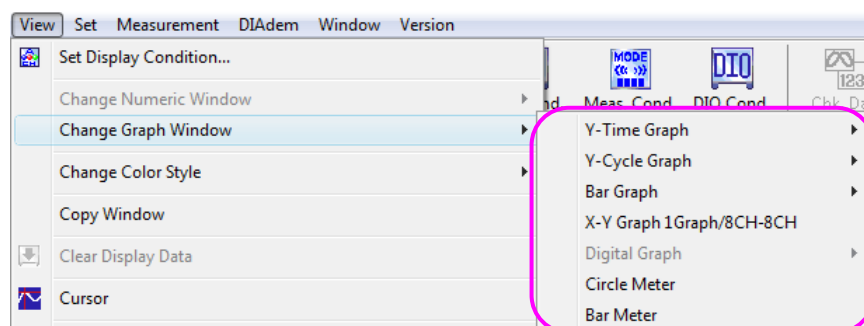
- Right-click the Numeric windows to display the pop-up-menu.

Click the **Change Display** on the pop-up-menu and click the target item.

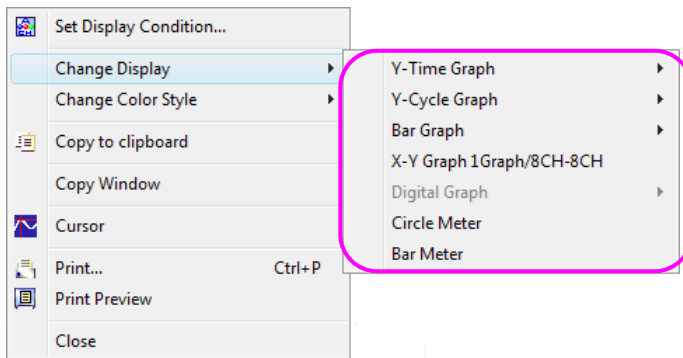


● Graph windows

- Click the View - Change Graph window - target item.



- Right-click the Graph windows to display the pop-up-menu.
Click the **Change Display** on the pop-up-menu and click the target item.



5-2 To change color style

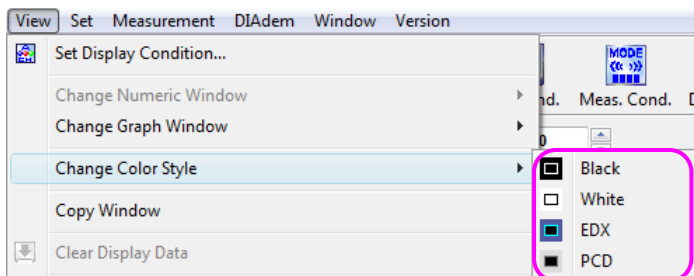
This section describes how to change the color style (window background color, graph background color, frame color, scale color, and legend color) of the active Numeric windows/Graph windows.

■ To change color style

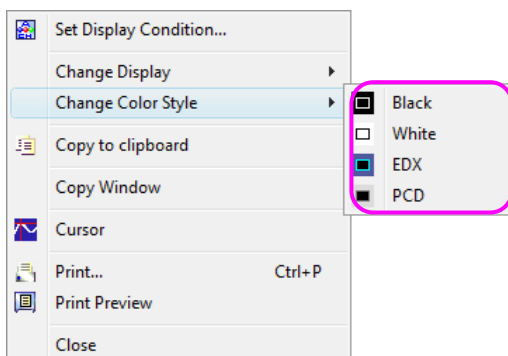
(1) Activate the Numeric windows/Graph windows.

(2) Operate the DCS-100A by any of the following.

- Click the View - Change Color Style.



- Right-click the Numeric windows/Graph windows to display the pop-up-menu.
Click the **Change Color Style** on the pop-up-menu.
(In the following example, the graph window is Y-Time Graph.)



5-3 To copy windows

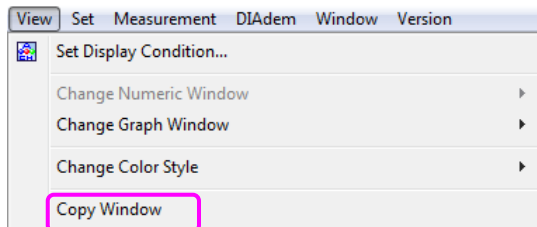
This section describes how to copy the conditions of the active Numeric windows/Graph windows for displaying new windows.

■ To copy windows

(1) Activate the Numeric windows/Graph windows.

(2) Copy the window by any of the following.

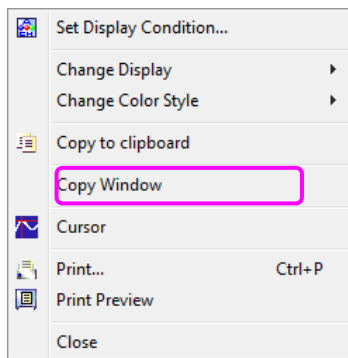
- Click the View - Copy Window.



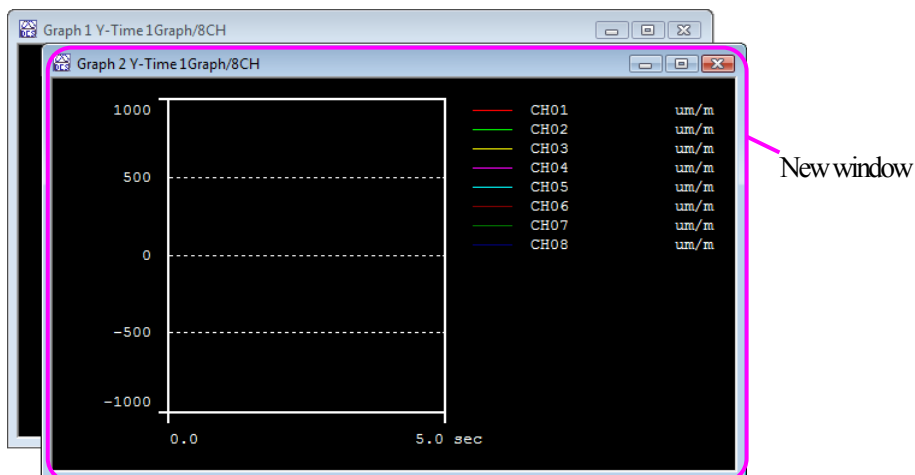
- Right-click the Numeric windows/Graph windows to display the pop-up-menu.

Click the **Copy Window** on the pop-up-menu.

(In the following example, the graph window is Y-Time Graph.)



(3) The new window appears.



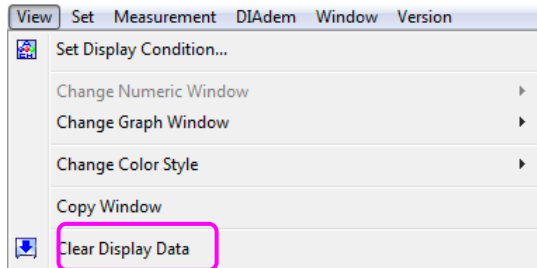
5-4 To clear the display data

This section describes how to clear the monitor data on all Numeric windows/Graph windows.

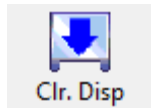
■ To clear the display data

(1) Clear the monitor data by any of the following.

- Click the View - Copy Window.

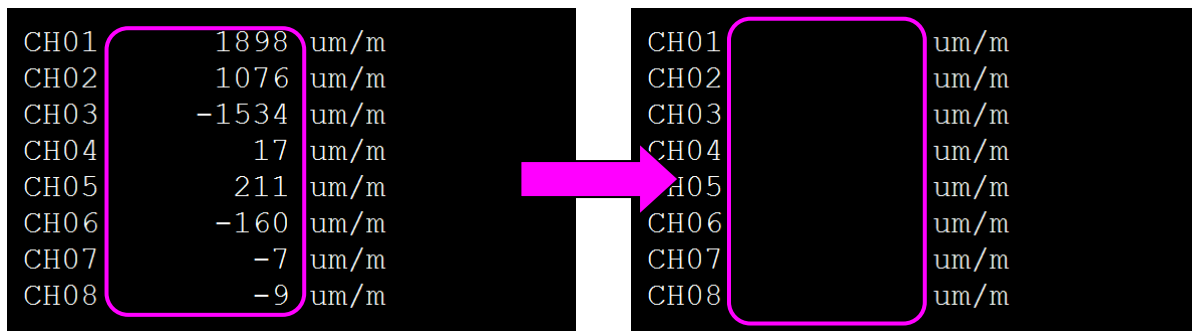


- Click the **Cir. Disp** icon from the tool bar.

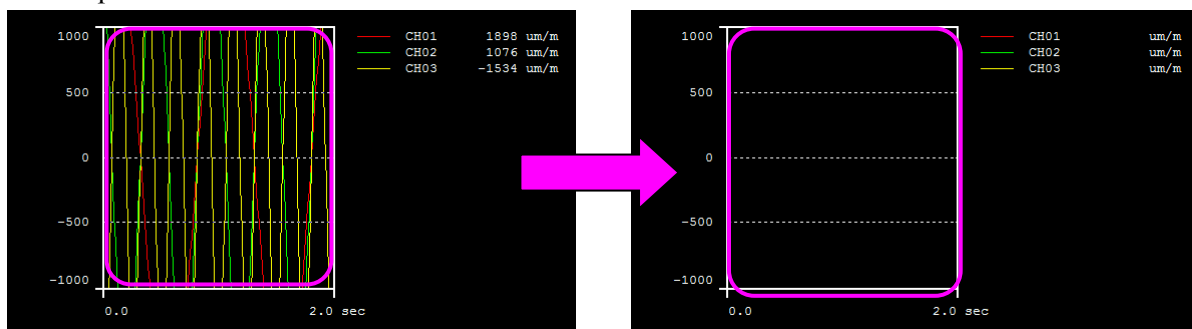


(2) The monitor data on all Numeric windows/Graph windows will be cleared.

- Numeric windows



- Graph windows



5-5 To display the cursor

This section describes how to display the cursor on the active graph window.

The cursor enables you to check the display data, on the graph line, in numeric values.

MEMO

The cursor operation is available on the Y-Time Graph and X-Y Graph.

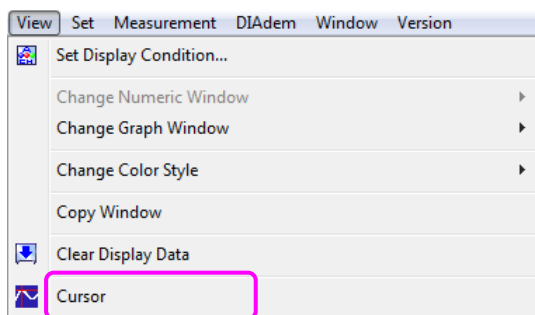
The cursor operation is not available on the Bar Graph, Digital Graph, Circular Meter, and Bar Meter.

■ To display the cursor

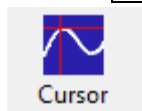
(1) Activate the Graph windows.

(2) Display the cursor by any of the following.

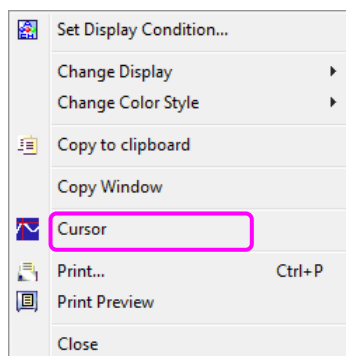
- Click the View - Cursor.



- Click the **Cursor** icon from the tool bar.



- Right-click the Graph windows to display the pop-up-menu.
Click the **Cursor** on the pop-up-menu.
(In the following example, the graph window is Y-Time Graph.)



(3) The Cursor enables you to show/hide the cursor.

Make sure the cursor is ON.

Show

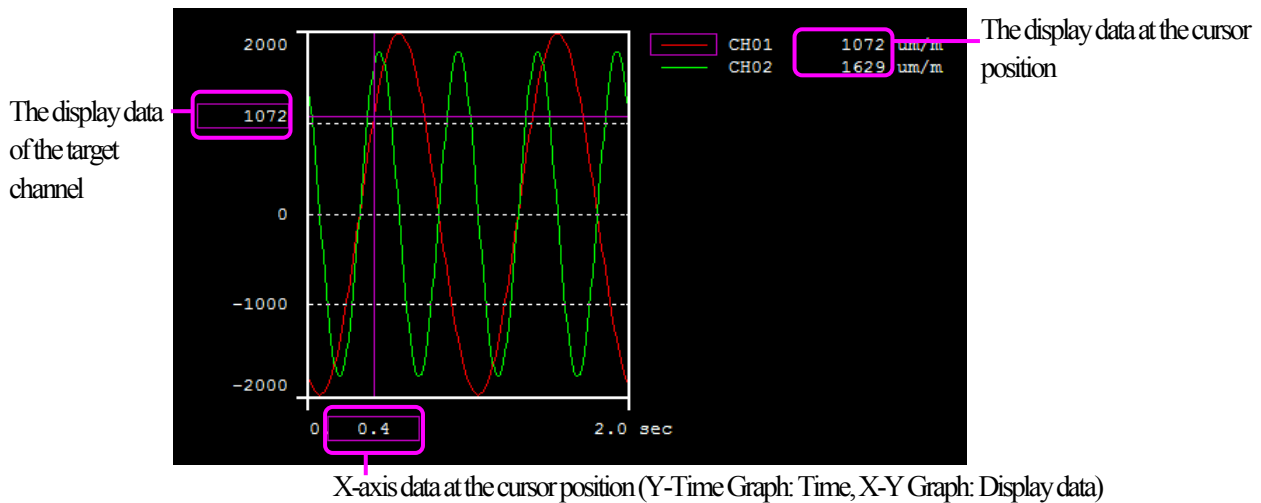


Hide

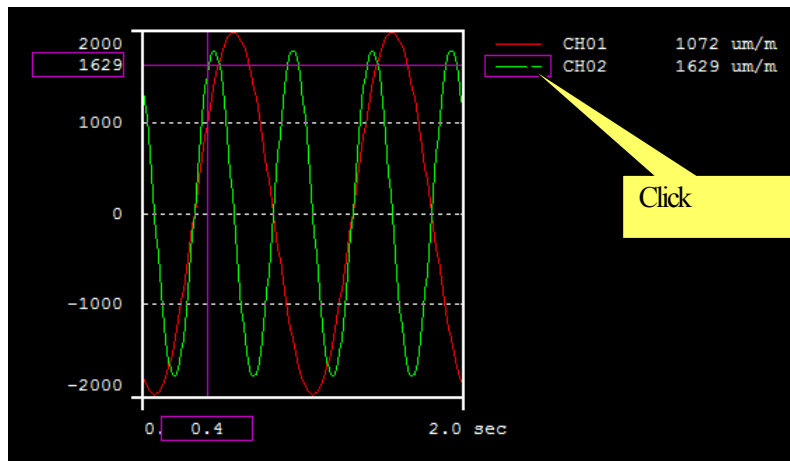


(4) The cursor appears on the active graph window.

Press the [←] or [→] on your keyboard. The cursor enables you to check the display data, on the graph line, in numeric values. The legend values also enable you to check the display data, at the cursor position.



(5) To change the target channel, press the [↑] or [↓] on your keyboard or click the target channel's legend line.



■ To move the cursor

- | | |
|----------------------------------|--|
| [←] and [→]: | Moves the cursor, by single data, to the left/right. |
| [Shift] + [←] and [Shift] + [→]: | Moves the cursor, by 10 data, to the left/right. |
| [↑] and [↓]: | Changes the target channel. |

MEMO

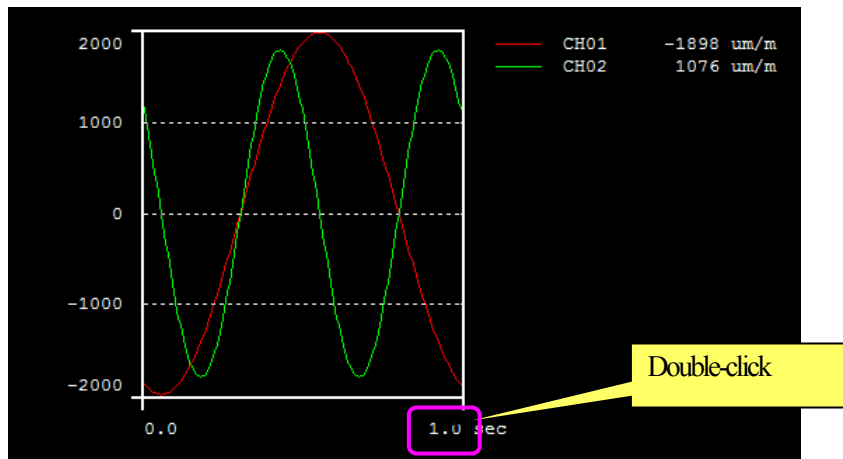
- You are able to move the cursor by dragging mouse.
- You are able to display single cursor on single graph window.

5-6 To change scale values on the graph windows

This section describes how to change the x-axis scale value/y-axis scale value on the graph window.

■ To change scale values

(1) Double-click the scale value on the graph window.



(2) The following controller appears.

Set the values by any of the following and press the [ENTER] key.

- Input numerical values directly.
- Click the spin button.

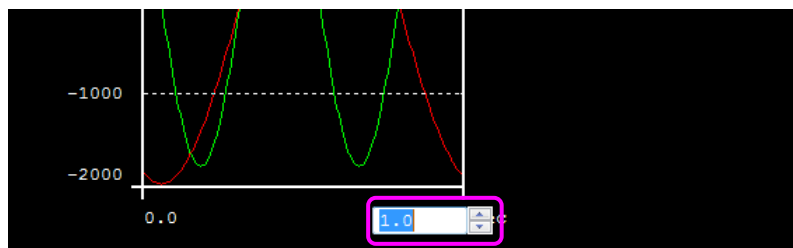
Up arrow: Increases the numerical value in 1/2/5 step.

[Example] $10 \rightarrow 20 \rightarrow 50 \rightarrow 100$

Down arrow: Decreases the numerical value in 1/2/5 step.

[Example] $10 \rightarrow 5 \rightarrow 2 \rightarrow 1$

To cancel the values, press the [ESC] key.

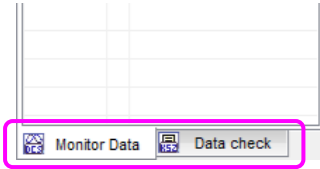


5-7 To select channels to be displayed on the CH Disp Bar

Channels on the CH Disp Bar are able to be set on the Numeric windows/Graph windows by drag-and-drop operations.

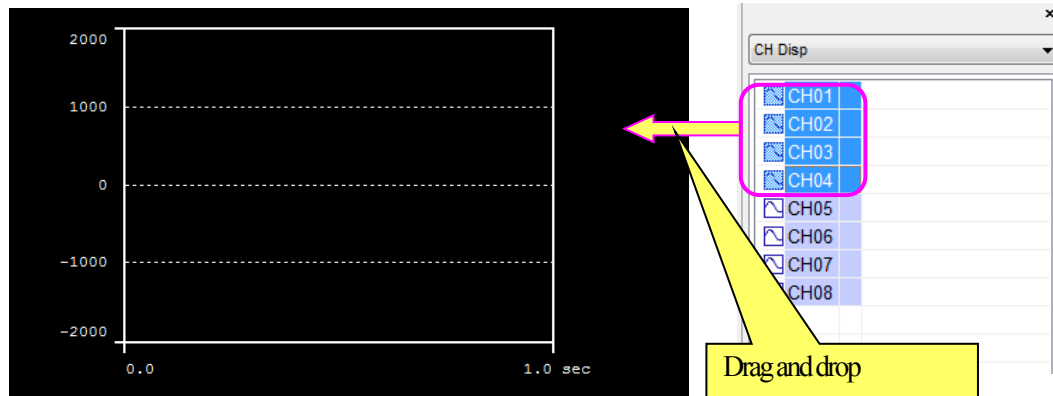
■ To select channels to be displayed

(1) Select the Monitor Data or Data Check on the [CH] tab on the CH Disp Bar.

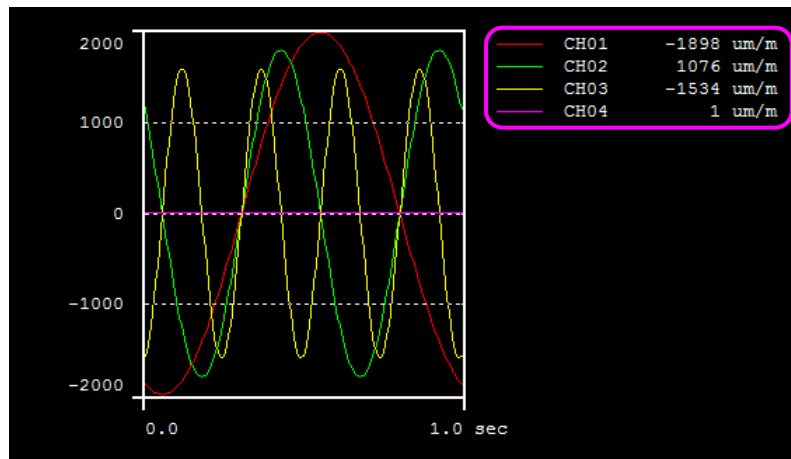


(2) Left-click the target channels on the CH Disp Bar.

Drag and drop them to the target window to display the target channels.



(3) The target channels appear on the target window.

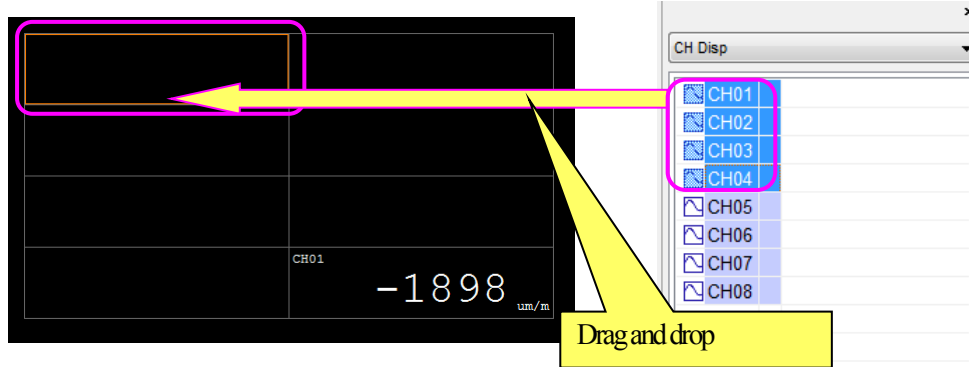


■ **To select channels to be displayed on the Numeric window ("Grid" style or "Max/Min" style)**

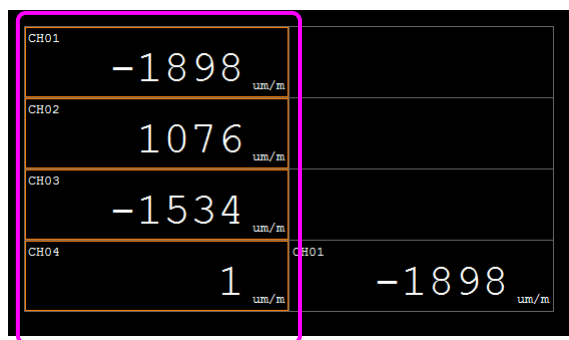
This section describes how to select channels on the CH Disp Bar onto the Numeric windows ("Grid" style or "Max/Min" style) by drag-and-drop operations.

(1) Left-click the target channels on the CH Disp Bar.

Drag and drop them to the target window to display the target channels.



(2) The target channels appear on the target window.

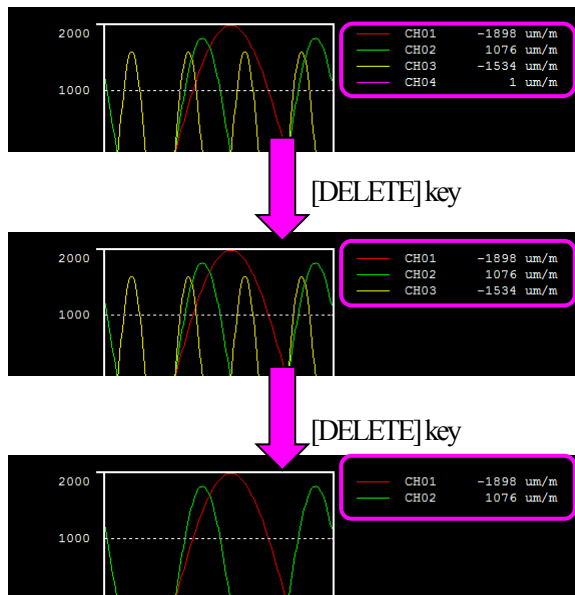


5-8 To delete channels on the windows

This section describes how to delete the channels, from the bottom item to the top item, on the active Numeric windows/Graph windows by pressing the [DELETE] key.

■ To delete channels

- (1) Activate the target windows.
- (2) Press the [DELETE] key to delete the channels from the bottom item to the top item.



■ To delete channels to be displayed on the Numeric window ("Grid" style or "Max/Min" style)

This section describes how to delete channels on the CH Disp Bar onto the Numeric windows ("Grid" style or "Max/Min" style) by pressing the [DELETE] key.

- (1) Click the target channel.

The target channel will be circled in orange.

CH01	-1898 $\mu\text{m}/\text{m}$	CH05	17 $\mu\text{m}/\text{m}$
CH02	1076 $\mu\text{m}/\text{m}$	CH06	-13 $\mu\text{m}/\text{m}$
CH03	-1534 $\mu\text{m}/\text{m}$	CH07	148 $\mu\text{m}/\text{m}$
CH04	1 $\mu\text{m}/\text{m}$	CH08	-148 $\mu\text{m}/\text{m}$

- (2) Press the [DELETE] key to delete the channel.

		CH05	17 $\mu\text{m}/\text{m}$
CH02	1076 $\mu\text{m}/\text{m}$	CH06	-13 $\mu\text{m}/\text{m}$
CH03	-1534 $\mu\text{m}/\text{m}$	CH07	148 $\mu\text{m}/\text{m}$
CH04	1 $\mu\text{m}/\text{m}$	CH08	-148 $\mu\text{m}/\text{m}$

5-9 Change channel button

The Change channel button appears on the left on the Numeric windows/Graph windows, when you point the mouse cursor on the left (or the Change channel button appears on the right on the Numeric windows/Graph windows, when you point the mouse cursor on the right). The Change channel button enables you to change the channels to be displayed.

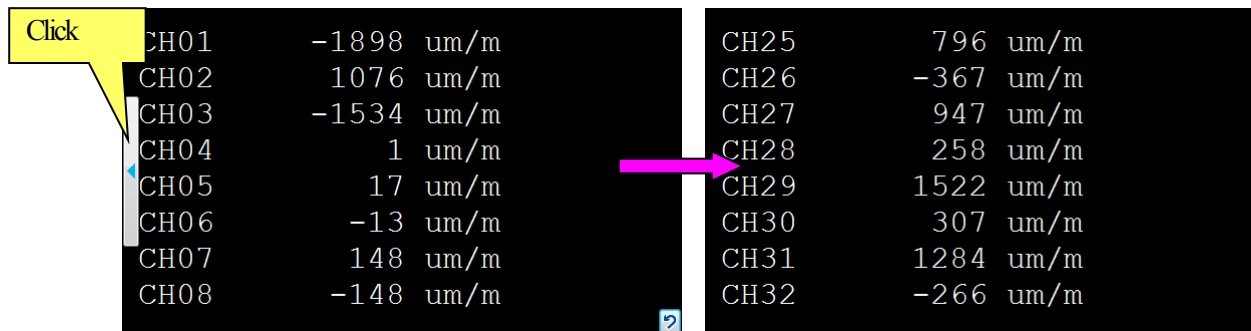
■ Left

The Change channel button, on the left: The previous channels appear.

● Numeric windows

[Example]

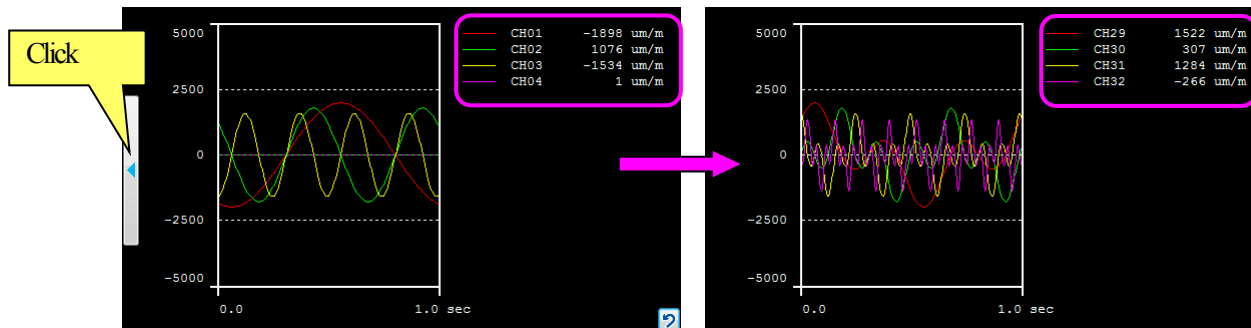
CH01 to CH08 → CH25 to CH32



● Graph windows

[Example]

CH01 to CH04 → CH29 to CH32



■Right

The Change channel button, on the right: The next channels appear.

●Numeric windows

[Example]

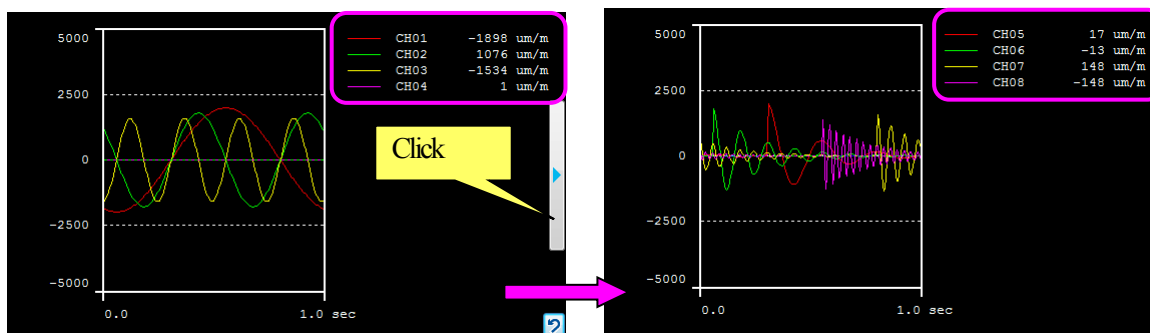
CH01 to CH08 → CH09 to CH16

CH01	-1898	um/m	Click	CH09	796	um/m
CH02	1076	um/m		CH10	-367	um/m
CH03	-1534	um/m		CH11	947	um/m
CH04	1	um/m		CH12	258	um/m
CH05	17	um/m		CH13	1522	um/m
CH06	-13	um/m		CH14	307	um/m
CH07	148	um/m		CH15	1284	um/m
CH08	-148	um/m		CH16	-266	um/m

●Graph windows

[Example]

CH01 to CH04 → CH05 to CH08



MEMO

To undo your last action, click the .

The same operation is available by clicking the Edit - Undo.

5-10 To check data after recording

This section describes how to display the confirmation window for checking the recorded data, immediately after recording the data.

NOTE

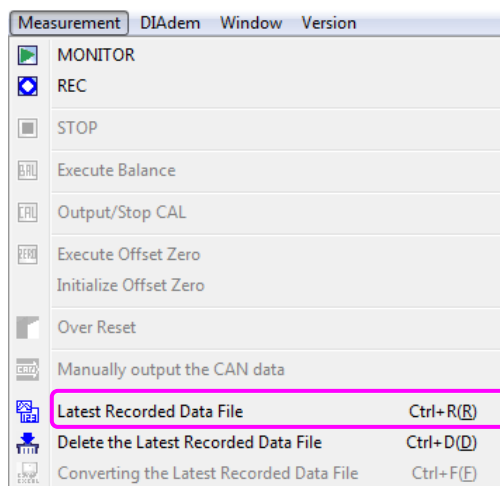
- The checking operation is available on the Numeric windows (monitor data), Y-Time Graph windows (excluding the 1 Graph/All CHs), X-Y Graph windows, and digital graph windows.
- To execute the checking operation, save the recorded data file into the PC's Data Save Folder.
- To close the confirmation window automatically, start monitoring data again.

■ To check data

(1) Immediately after recording the data, activate the target window.

(2) Open the confirmation window by any of the following.

- Click the Measurement - Latest Recorded Data File.



- Click the **Chk. Data** icon from the tool bar.



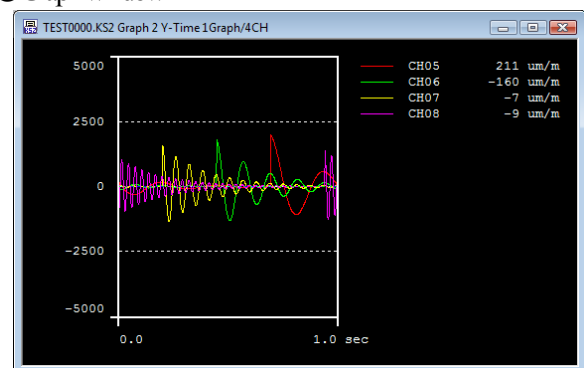
(3) The confirmation window appears.

● Numeric window

The screenshot shows a window titled 'TEST0000.KS2 Numeric 2 List'. It displays a table with columns for Data No., Time(sec), and five channels (CH01 to CH05). The data is organized into two sections: '1 - 5000' and '5001 - 6900'. The '5001 - 6900' section is currently selected, showing data for 14 data points. Each data point includes a time value and five corresponding channel values in um/m.

Data No.	Time(sec)	CH01	CH02	CH03	CH04	CH05
		um/m	um/m	um/m	um/m	um/m
1	0.000	1902	-1058	1522	1	138
2	0.001	1898	-1076	1534	1	127
3	0.002	1894	-1094	1545	1	115
4	0.003	1890	-1112	1555	1	104
5	0.004	1886	-1130	1564	1	93
6	0.005	1882	-1147	1572	1	82
7	0.006	1877	-1165	1579	1	70
8	0.007	1873	-1182	1585	1	59
9	0.008	1869	-1199	1590	1	48
10	0.009	1864	-1216	1594	1	37
11	0.010	1860	-1232	1597	1	27
12	0.011	1855	-1249	1599	1	16
13	0.012	1850	-1265	1600	1	5
14	0.013	1845	-1281	1600	1	-5

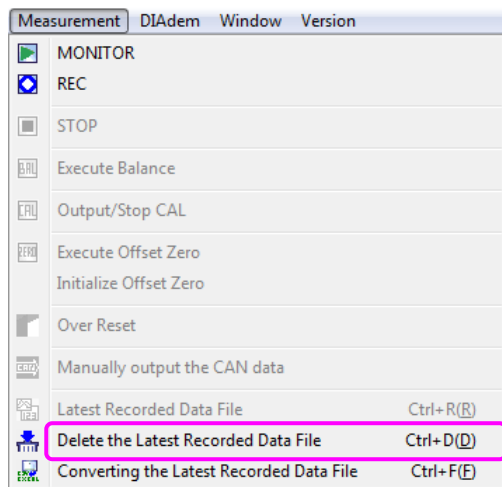
● Graph window



■ To delete data

(1) After checking the recorded data on the confirmation window, if the data is not necessary, delete the data file by any of the following.

- Click the Measurement - Delete the Latest Recorded Data File.

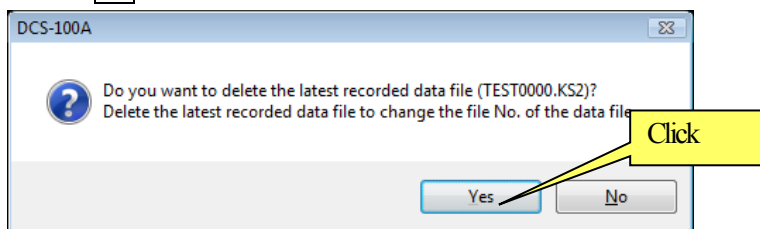


- Click the **Del. Data** icon from the tool bar.



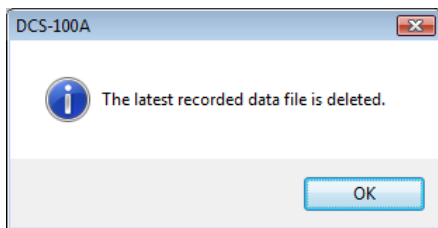
(2) The following message appears.

Click the **Yes** button.



(3) The following message appears.

After deleting the data files, the DCS-100A closes all confirmation windows and decrements the file No. of the data files.

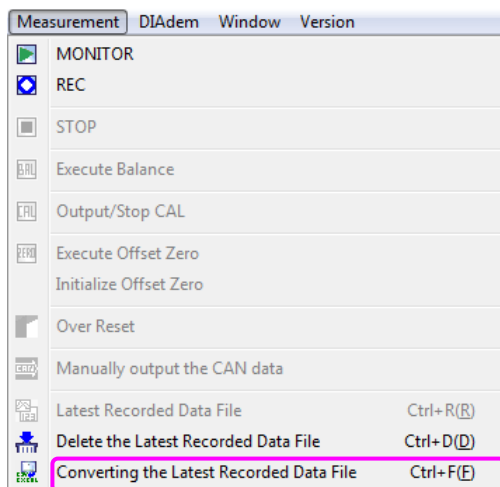


■ To convert data

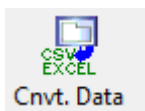
(1) After checking the recorded data on the confirmation window, you are able to convert the data files into the CSV format file.

Convert the data files by any of the following.

- Click the Measurement - Converting the Latest Recorded Data File.

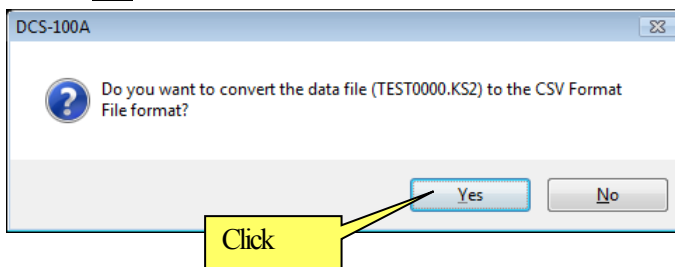


- Click the **Cnvt. Data** icon from the tool bar.

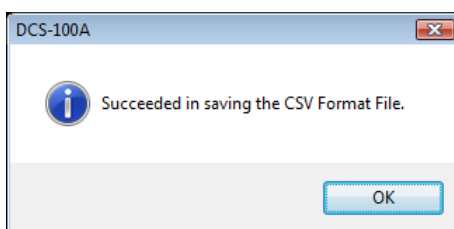


(2) The following message appears.

Click the **Yes** button.

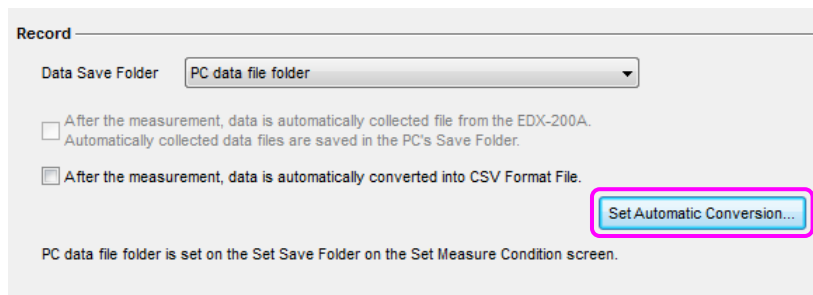


(3) The following message appears.

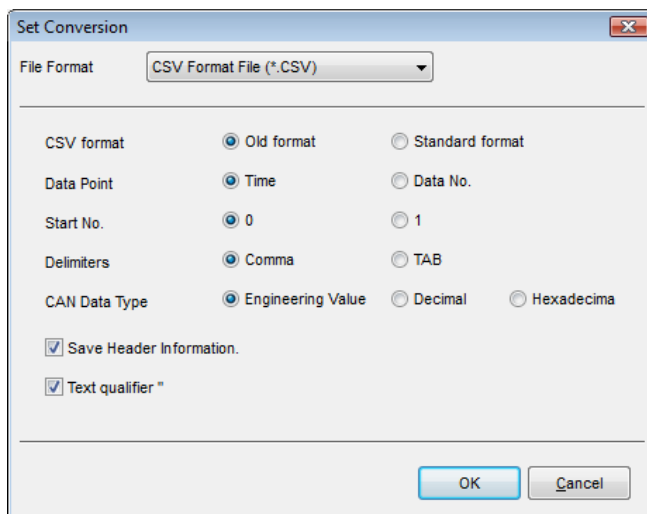


MEMO

To select the file format, click the Set Environment window - [General] tab - **Set Automatic Conversion...** button to open the Set Conversion window.

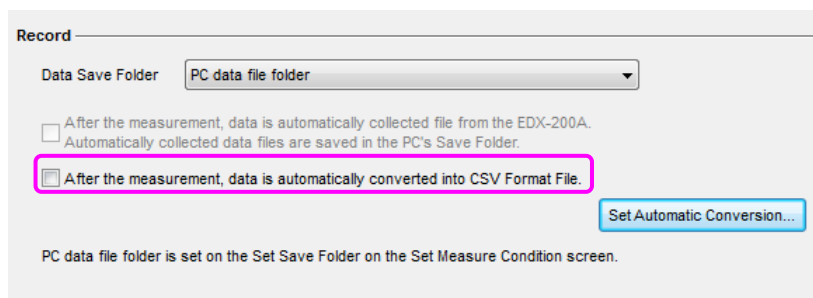


● Set Conversion window



NOTE

You are not able to convert the data files manually when the DCS-100A converts data files automatically.
To convert data files manually, release a check mark from the check box next to the "After the measurement, data is automatically converted into CSV Format File." on the [General] tab on the Set Environment window.



5-11 To display comparative data

Displays the comparative data (previous KS2 format file) on the Y-Time Graph windows (excluding the 1 Graph/All CHs) and X-Y Graph window for comparing the monitor data.

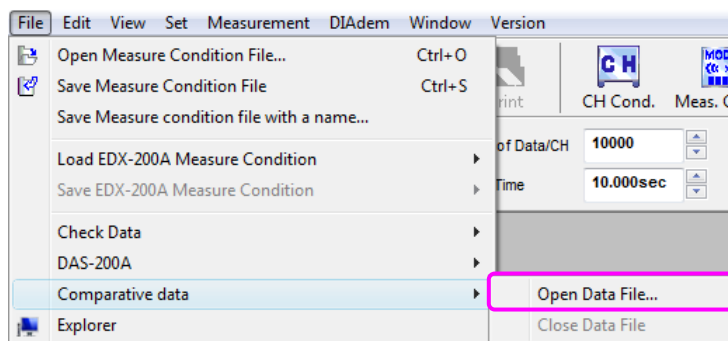
The size of data file available on a single screen is up to 10 MB. When the data file size is larger than 10 MB, the DCS-100A displays 10MB data from its head.

NOTE

While executing the dual-sampling measurement and noise-reduction function with the EDX-200A, you are not able to display the comparative data.

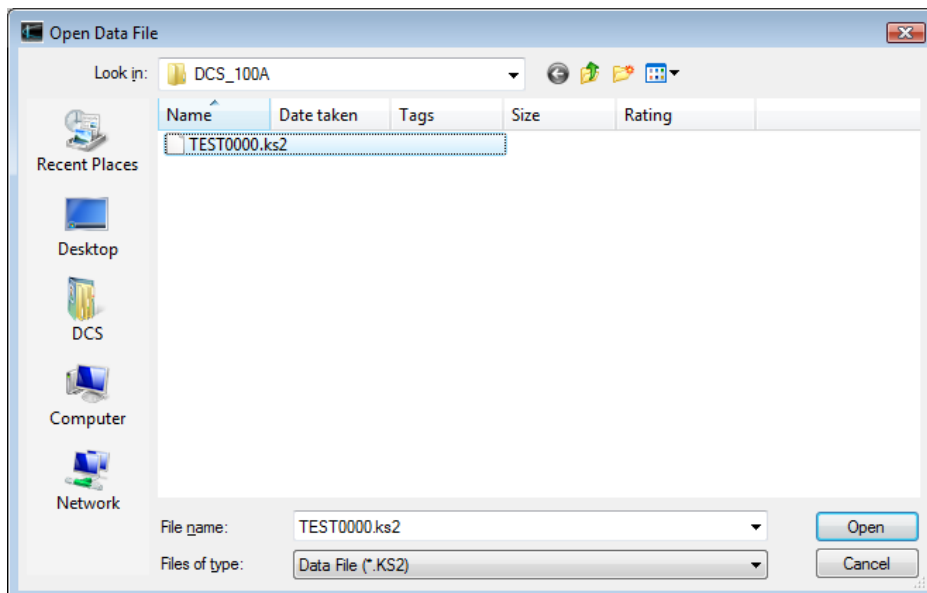
■ To display the comparative data.

(1) Click the File - Comparative data - Open Data File....

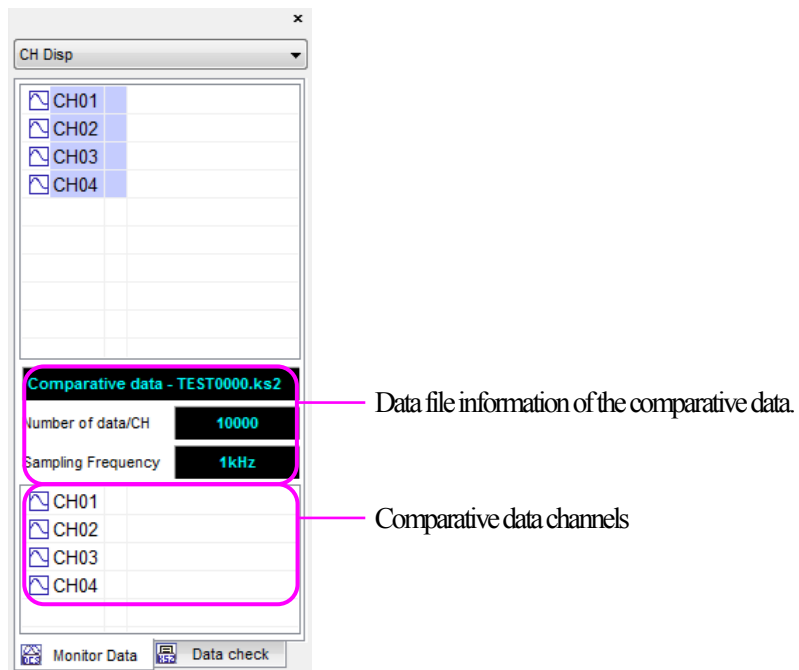


(2) The Open Data File window appears.

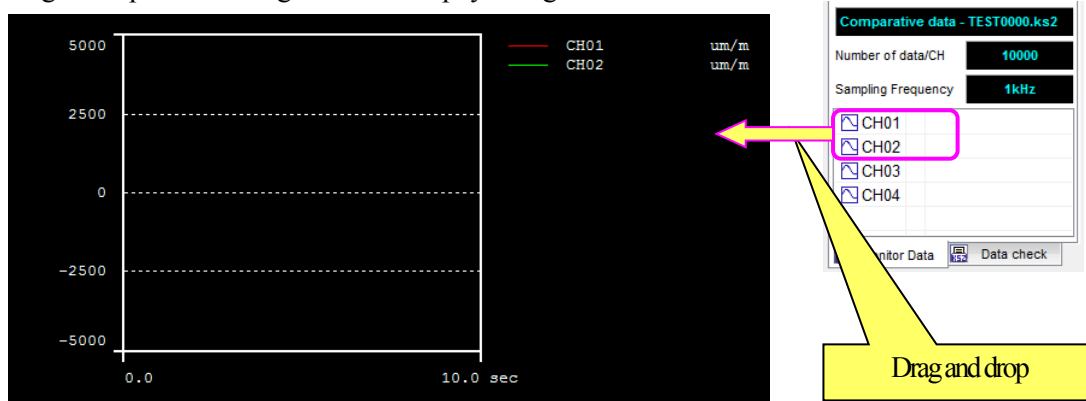
Select the data file and click the **Open** button.



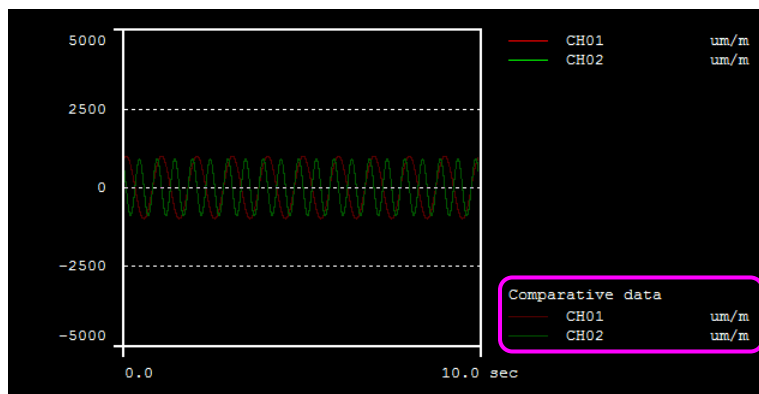
(3) The comparative data channels appear on the CH Disp Bar.



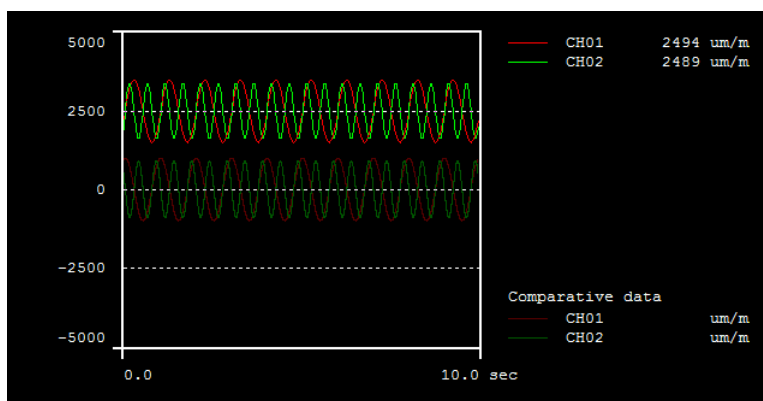
(4) Left-click the target channels on the CH Disp Bar.
Drag and drop them to the target window to display the target channels.



(5) The target channels appear on the target window.



(6) To compare the monitor data to comparative data (previous KS2 format file), start monitoring data.



■ [Graph] tab

Sets the comparative data channels on the [Graph] tab on the Set Display Condition... window.

General Graph Details

Display Data

CH No.	Width	Color
CH01	1	Red
CH02	1	Green
---	1	Yellow
---	1	Magenta
---	1	Cyan
---	1	Brown
---	1	Dark Green
---	1	Dark Blue
---	1	Bright Green

Set CH
Clear CH

X Axis Scale (sec)

Set Auxiliary Lines... Label

Y Axis Scale

Set Auxiliary Lines... Label

Comparative data - TEST0000.ks2

CH No.	Width	Color
CH01	1	Dark Red
CH02	1	Dark Green
---	1	Dark Blue
---	1	Dark Purple

Set CH
Clear CH

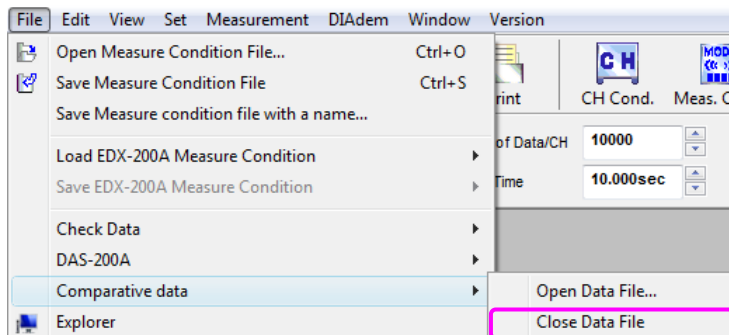
MEMO

- The Y-Time Graph displays up to 4-channel comparative data on a single graph.
- The X-Y Graph displays up to 2 sets of comparative data (x-axis: 2 channels, y-axis: 2 channels) on a single graph.
- To display the Comparative data on the [Graph] tab on the Set Display Condition... window and comparative data channels on the CH Disp Bar, make sure the comparative data files are open.

■ To close the comparative data files.

Click the File - Comparative data - Close Data File...

The DCS-100A closes the comparative data files and hides the comparative data on all windows.

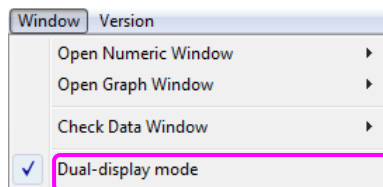


5-12 Dual-display mode

This section describes how to display the Numeric windows/Graph windows on the sub display, when using multiple displays.

■ To operate the Dual-display mode

(1) Click the Window - Dual-display mode to put a check mark to the check box next to the "Dual-display mode".



(2) You are able to move the Numeric windows/Graph windows from the main window.

NOTE

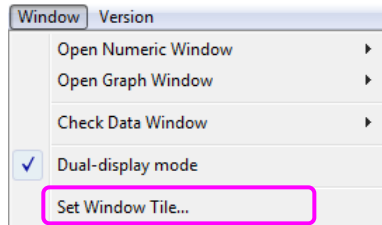
To close all Numeric windows/Graph windows, located outside the main window, release a check mark from the check box next to the "Dual-display mode."

5-13 To tile windows

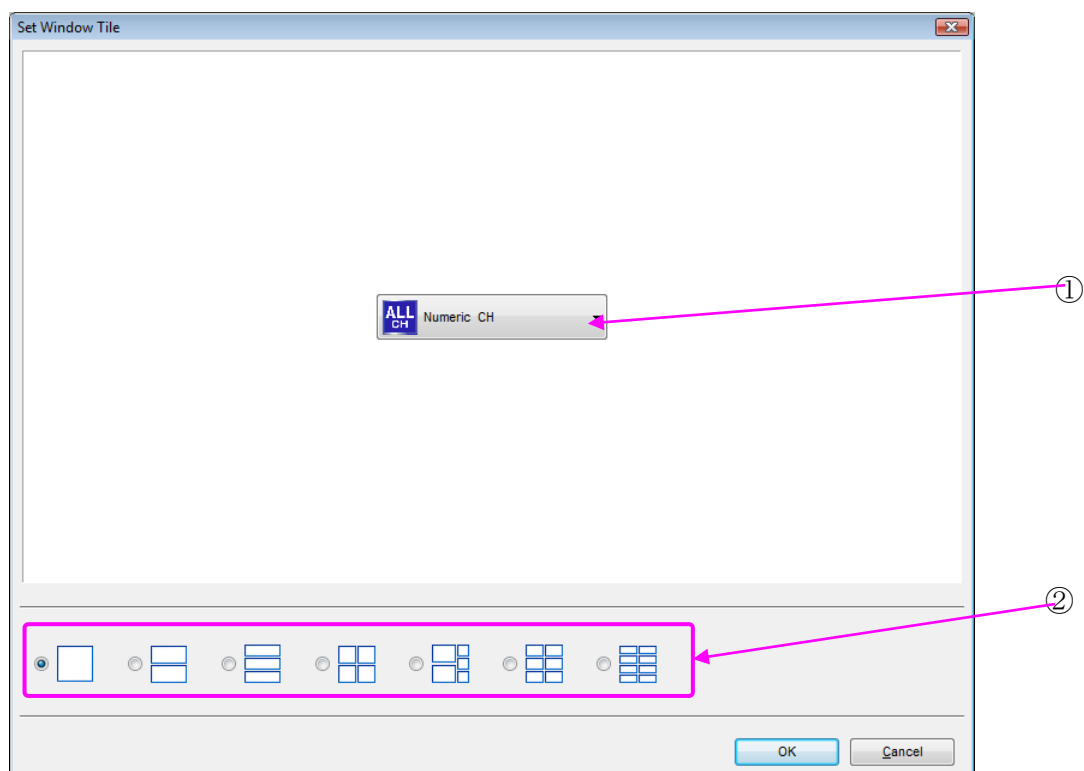
This section describes how to tile Numeric windows/Graph windows on the main window.

■ To tile windows

(1) Click the Window - Set Window Tile....



(2) The following window appears.



①List

Select the target Numeric windows/Graph windows.

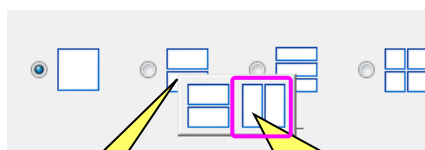
②Layout

Select the target layout.

1 window/2 windows/3 windows/4 windows/5 windows/6 windows/8 windows

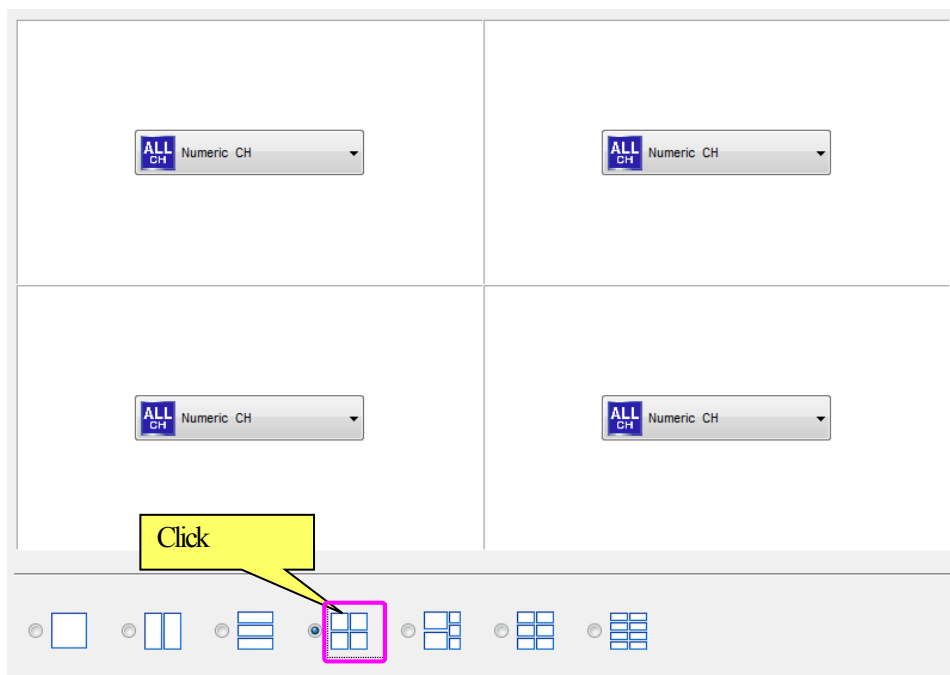
MEMO

To change the layout of each icon, right-click the layout icon (2 windows to 5 windows only).

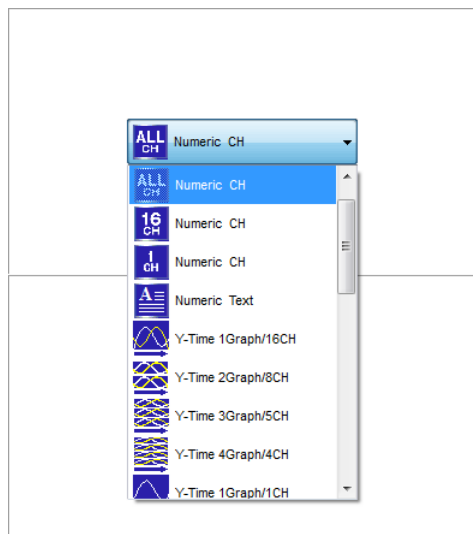


(3) Select the layout.

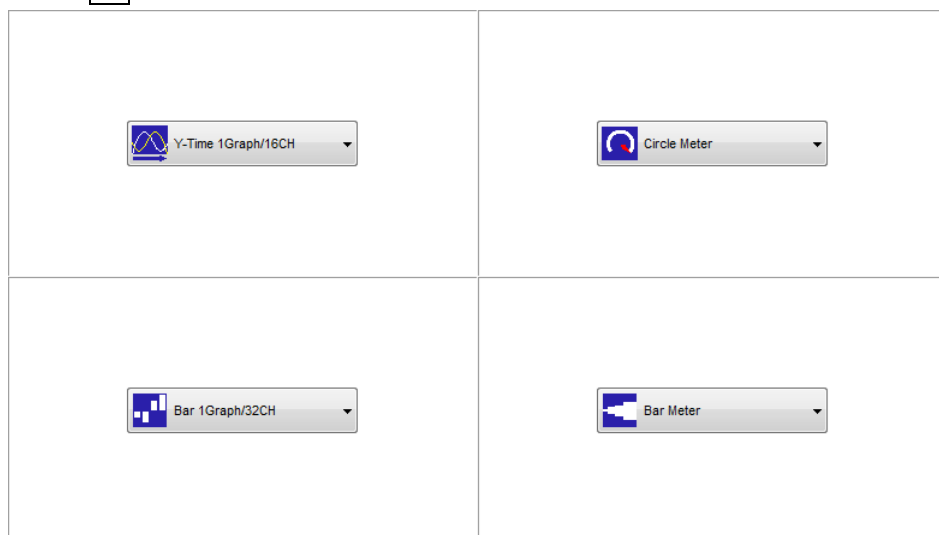
(In the following example, the layout icon is 4 graphs.)



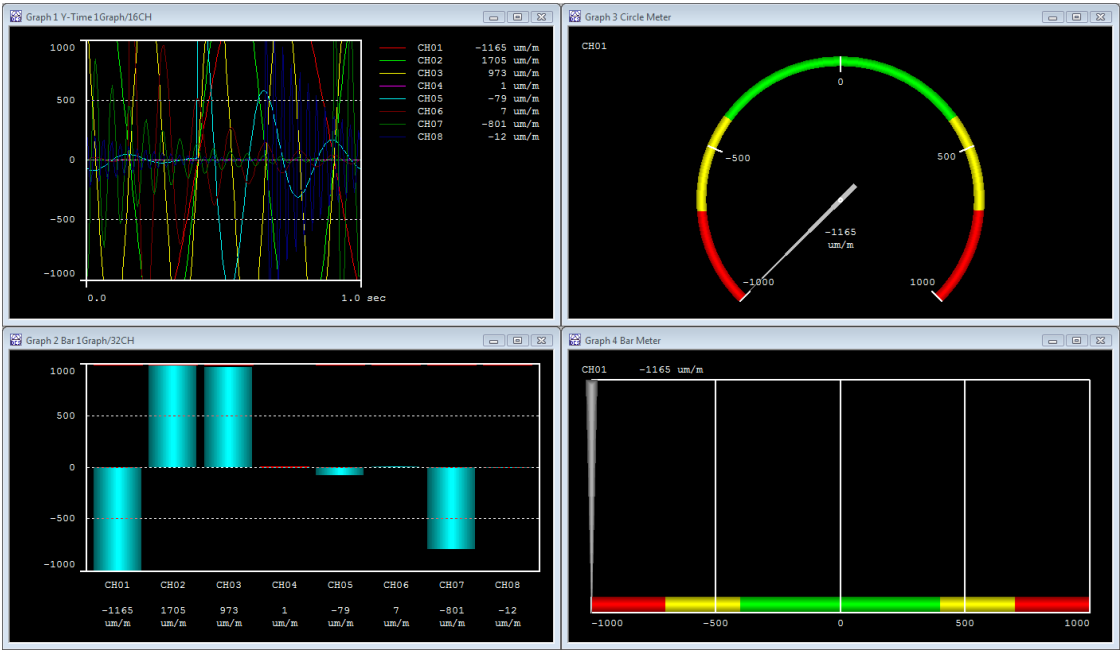
(4) Select the target Numeric windows/Graph windows.



(5) Click the **OK** button.



(6)The pre-set windows, on the Set Window Tile window, appear on the main window.



6. Editing

6-1 To zooming the scale

This section describes how to zoom in the x-axis scale/y-axis scale on the graph window by dragging mouse.

■ To zoom in the scale

(1) Activate the Graph windows.

(2) Enable the zoom in function by any of the following.

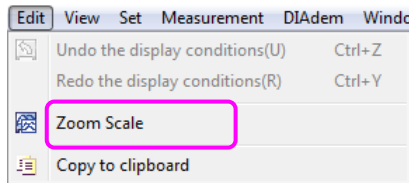
Enabled state



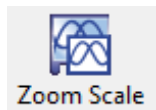
Disabled state



• Click the Edit - Zoom Scale.



• Click the Zoom Scale icon from the tool bar.



(3) With the zoom in function in the enabled state, drag the mouse within the graph to zoom in the x-axis scale/y-axis scale.

6-2 To undo the display conditions

Every Numeric window/Graph window has the latest 5-step conditions.

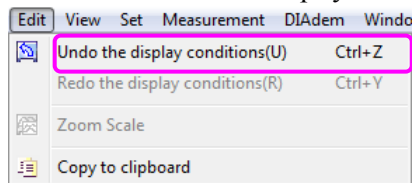
To undo your last action, click the Undo the display conditions.

■ To undo

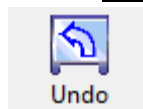
(1) Activate the Numeric windows/Graph windows.

(2) Undo the display conditions by any of the following.

• Click the Edit - Undo the display conditions (U).



• Click the Undo icon from the tool bar.

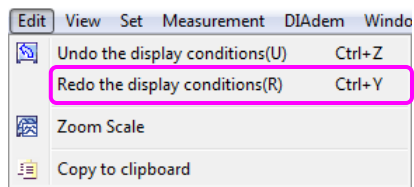


6-3 To redo the display conditions

To redo your last action, click the Redo the display conditions.

■ To redo

- (1) Activate the Numeric windows/Graph windows.
- (2) Click the Edit - Redo the display conditions.

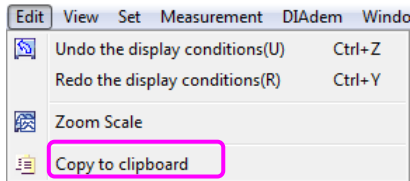


6-4 To copy data to clipboard

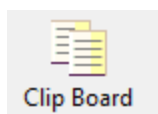
This section describes how to copy the active Numeric windows/Graph windows to the clipboard.

■ To copy data to clipboard

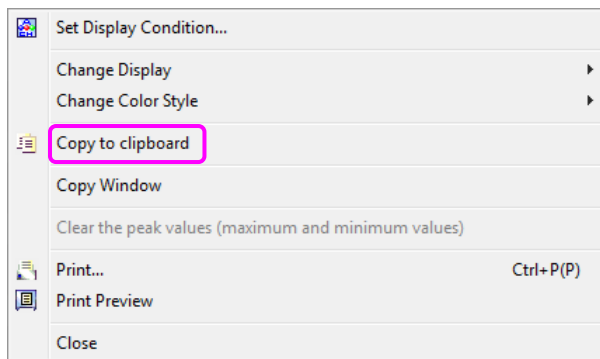
- (1) Activate the Numeric windows/Graph windows.
- (2) Copy data to the clipboard by any of the following.
 - Click the Edit - Copy to clipboard.



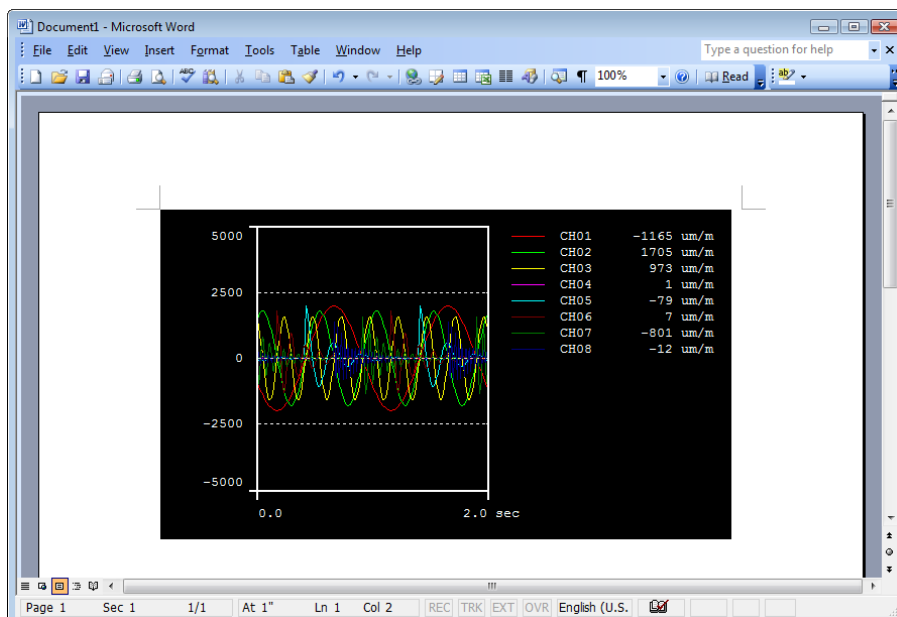
- Click the **Clip Board** icon from the tool bar.



- Right-click the Numeric windows/Graph windows to display the pop-up-menu.
Click the **Copy to clipboard** on the pop-up-menu.
(In the following example, the graph window is Y-Time Graph.)



- (3) In the following example, the DCS-100A pastes the graph window, saved on the clipboard, onto the Word file.



7. Set environment window

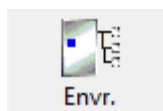
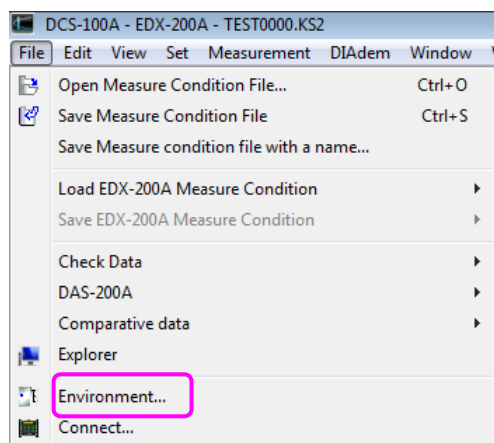
This section describes how to set the interface between the PC and measuring instrument, the number of controllable units, the hardware configuration, and the real-time processions.

This section describes the common operations that can be performed on the Set Environment window.

■How to display

Open the Set Environment window by any of the following.

- Click the File - Environment...
- Click the **Envr.** icon from the tool bar.



7-1 [General] tab

This section describes how to set the user arbitrary unit.

7-1-1 To set units

Up to 3 user arbitrary units can be registered.

Input the user arbitrary unit within 7 characters.

The determined units can be selected by selecting Unit on the Set CH Condition window.

7-2 [Disp] tab

This section describes how to set display conditions.

The Number of Display Digits

8

Set the number of numeric digits to display graph scale, legends, and numeric value data on numeric or graph window.

Number of digits of the name

40

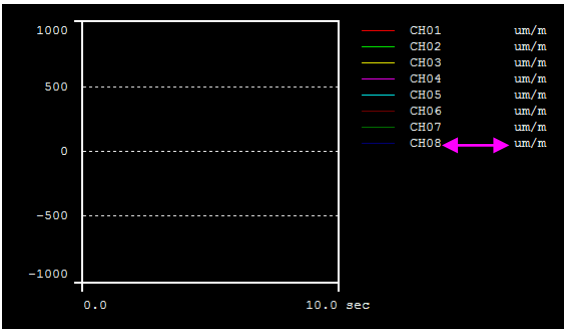
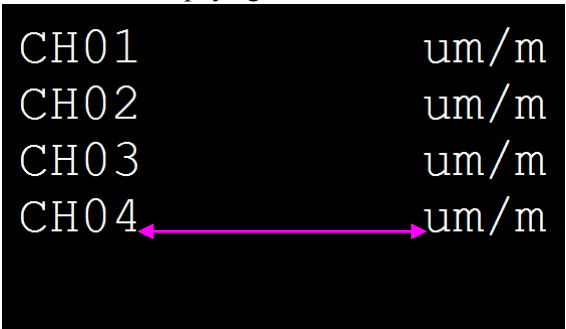
☒ When starting up the DCS-100A the next time, the Control Device window is displayed.

7-2-1 The number of display digits

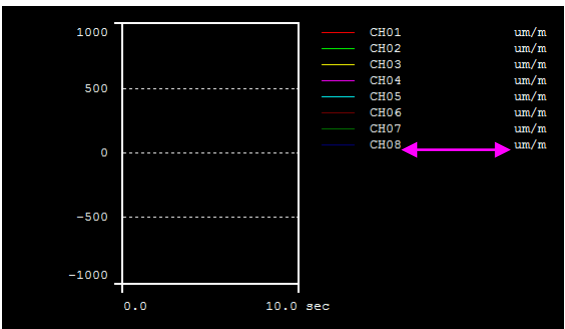
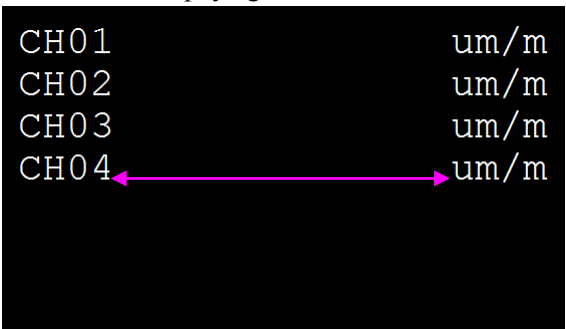
Set the number of numeric digits to display graph scale, legends, and numeric value data on Numeric windows/Graph windows.
(Range: 6 to 11 digits, the sign is included in the number of display digits.)

If the number of numeric values exceeds the specified numeric display range, it shall be expressed in exponential notation.

●The number of display digits: 6



●The number of display digits: 11



■ The number of display digits and Deci Digits on the Set CH Condition window

When the number of digits is pre-known, you are able to widen the range of the Numeric windows/Graph windows by making the number of display digits smaller.

The Deci Digits on the Set CH Condition window specifies the Number of decimals of the numerical data, on the Numeric windows/Graph windows.

However, note that the actual Number of decimals of the numerical data does not always match the pre-set Deci Digits on the Set CH Condition window

Specify the valid number of decimals as follows.

- (1) Calculate the maximum value by using the setting range, calibration constant and offset.
- (2) Get the number of integer digits of the maximum value, calculated in the item (1).
- (3) To specify the actual Number of decimals, subtract the number of integer digits (2) from the number of display digits, pre-set on the Set Environment window.

● Range: 100μm/m, Calibration constant: 1.0, Offset: 0.0

Calculate the maximum value Maximum value = $1000 \times 1.0 + 0.0 = 1000$

Calculate the number of integer digits The number of integer digits = 4

[Example 1]

The number of display digits: 11

11 (The number of display digits) - 1 (sign: ±) - 4 (the number of integer digits) - 1 (decimal point: .) = 5

Display format: ± * * * * . * * * * *

Based on the result, the valid number of decimals is 0 to 5.

If you set the number of decimals 6 or more, the number of decimals is 5.

[Example 2]

The number of display digits: 6

6 (The number of display digits) - 1 (sign: ±) - 4 (the number of integer digits) - 1 (decimal point: .) = 0

Display format: ± * * * *

Based on the result, the valid number of decimals is 0 only.

● The number of display digits and valid deci digits

Deci Digits	The number of display digits					
	6	7	8	9	10	11
0(*****))	✓	✓	✓	✓	✓	✓
1(*****.))		✓	✓	✓	✓	✓
2(*****.))			✓	✓	✓	✓
3(*****.))				✓	✓	✓
4(*****.))					✓	✓
5(*****.))						✓
6(*****.))						
7(*****.))						
8(*****.))						

✓: Valid

● When the Deci Digits is "AUTO" on the Set CH Condition window

The DCS-100A calculates the maximum value and specify the display format by using the maximum value and the number of display digits.

Maximum value	The number of display digits and display format		
	6	8	11
±100000	±1E±05	±100000	±100000
±10000	±10000	±10000	±10000
±1000	±1000	±1000.0	±1000.0
±100	±100.0	±100.00	±100.00
±10	±10.00	±10.000	±10.000
±1	±1.000	±1.0000	±1.0000
±0.1	±0.100	±0.1000	±0.1000
±0.01	±0.010	±0.0100	±0.0100
±0.001	±0.001	±0.0010	±0.0010
±0.0001	±0.000	±0.0001	±0.0001

[Example]

When the measured data is 0.012345, the numeric format is as follows.

The number of display digits	Numeric format
6	0.012
7	0.0123
8	0.01234
9	0.012345
10	0.012345
11	0.012345

7-2-2 Number of digits of the name

Sets the "number of digits of the name" on numeric windows' legend and graph windows' legend.

(Range: 10, 20, 30, and 40 digits)

When the channel name exceeds the "number of digits of the name", the channel name within the "number of digits of the name" appears.

[Example]

Channel name of CH01: ABCDEFGHIJKLMN

Number of digits of the name: 10 digits

The channel name of 10 digits (ABCDEFGHIJ) appears as follows.

CH01	ABCDEFGHIJ	um/m
CH02		um/m
CH03		um/m
CH04		um/m

7-2-3 Show or hide the device to be controlled window

For displaying the Device to be controlled window when starting up the DCS-100A the next time, put a check mark to the check box next to the "Displayed when starting up the DCS-100A the next time."

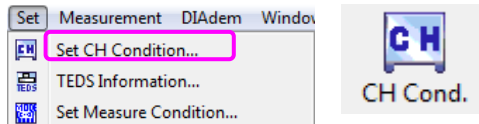
8. Set CH condition window

This section describes how to set the measurement ON/OFF, Mode, Range, Calibration constant, Unit, etc. for every CH.
This section describes the common operations that can be performed on the Set CH Condition window.

■How to display

Open the Set CH Condition window by any of the following.

- Click the Set - Set CH Condition...
- Click the **CH Cond.** icon from the tool bar.



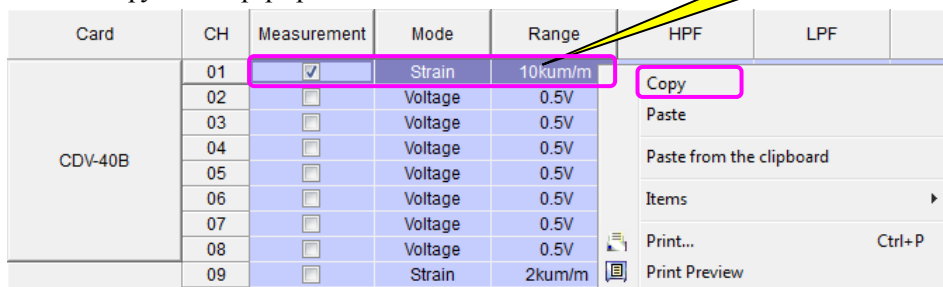
8-1 To copy and paste

This section describes how to copy the setting items to the other channels.

■To copy and paste

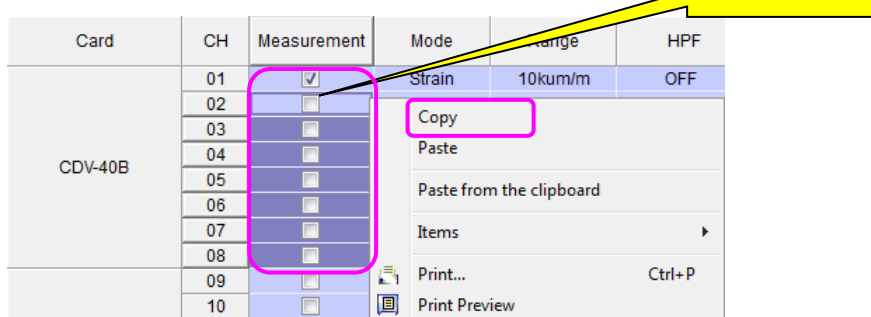
- (1) Drag the setting item of the copy source CH and right-click.

Select the Copy from the pop-up menu.



- (2) Drag the channels to be pasted and right-click.

Select the Paste from the menu.

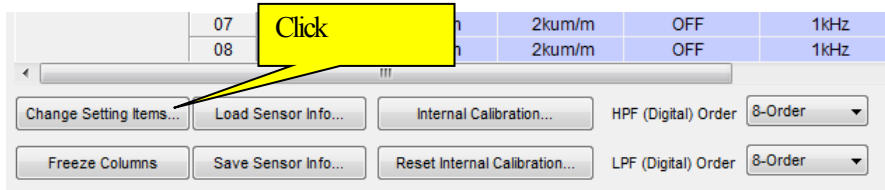


- (3) The setting items of the copy source are pasted to the setting items of the destination.

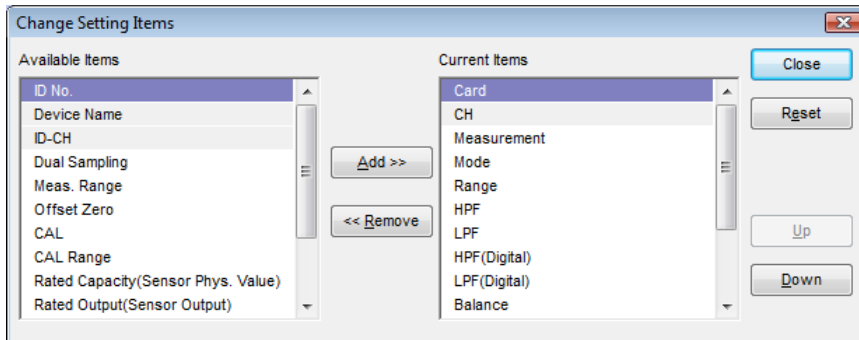
Card	CH	Measurement	Mode	Range
CDV-40B	01	☒	Strain	10kum/m
	02	☒	Strain	10kum/m
	03	☒	Strain	10kum/m
	04	☒	Strain	10kum/m
	05	☒	Strain	10kum/m
	06	☒	Strain	10kum/m
	07	☒	Strain	10kum/m
	08	☒	Strain	10kum/m

8-2 [Change Display Items] window

Click the **Change Setting Items** button to display the following window.



Setting items displayed on the window are added, removed, or sorted.



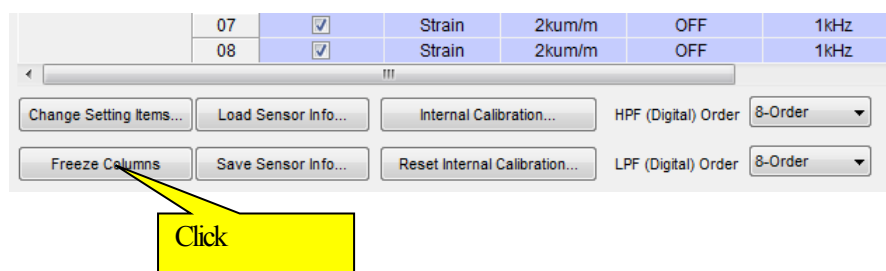
- Add** button The item currently not on the window is added to the window.
- Remove** button The item currently on the window is removed from the window.
- Close** button Determines the pre-set contents and closes the window.
- Reset** button Resets the item to the default status.
- Up/Down** button Sorts the current selecting items.
Choose the setting item you want to move, and click **Up** or **Down** button.

8-3 To freeze/unfreeze columns

This section describes how to freeze columns to keep them in view, as with the fixed columns.

■ To freeze columns

(1) Click the **Freeze Columns** button as follows.



(2) The blue line appears.

The **Freeze Columns** button changes to the **Unfreeze Columns** button.

Card	CH	Measurement	Mode	Range	HPF	LPF	HPF (Digital)
CDV-40B	01	☒	Strain	10kum/m	OFF	1kHz	OFF
	02	☒	Strain	10kum/m	OFF	1kHz	OFF
	03	☒	Strain	10kum/m	OFF	1kHz	OFF
	04	☒	Strain	10kum/m	OFF	1kHz	OFF
	05	☒	Strain	10kum/m	OFF	1kHz	OFF
	06	☒	Strain	10kum/m	OFF	1kHz	OFF
	07	☒	Strain	10kum/m	OFF	1kHz	OFF
	08	☒	Strain	10kum/m	OFF	1kHz	OFF

Change Setting Items...

Load Sensor Info...

Internal Calibration...

HPF (Digital) Order 8-Order

Unfreeze Columns

Save Sensor Info...

Reset Internal Calibration...

LPF (Digital) Order 8-Order

(3) Drag the blue line to freeze columns.

Card	CH	Measurement	Mode	Range	HPF	LPF	HPF (Digital)
CDV-40B	01	☒	Strain	10kum/m	OFF	1kHz	OFF
	02	☒	Strain	10kum/m	OFF	1kHz	OFF
	03	☒	Strain	10kum/m	OFF	1kHz	OFF
	04	☒	Strain	10kum/m	OFF	1kHz	OFF
	05	☒	Strain	10kum/m	OFF	1kHz	OFF
	06	☒	Strain	10kum/m	OFF	1kHz	OFF
	07	☒	Strain	10kum/m	OFF	1kHz	OFF
	08	☒	Strain	10kum/m	OFF	1kHz	OFF

(4) The freeze columns appear in blue.

In the following example, the freeze columns are "Measurement" and "Mode".

Card	CH	Measurement	Mode	Range	HPF	LPF	HPF (Digital)
CDV-40B	01	☒	Strain	10kum/m	OFF	1kHz	OFF
	02	☒	Strain	10kum/m	OFF	1kHz	OFF
	03	☒	Strain	10kum/m	OFF	1kHz	OFF
	04	☒	Strain	10kum/m	OFF	1kHz	OFF
	05	☒	Strain	10kum/m	OFF	1kHz	OFF
	06	☒	Strain	10kum/m	OFF	1kHz	OFF
	07	☒	Strain	10kum/m	OFF	1kHz	OFF
	08	☒	Strain	10kum/m	OFF	1kHz	OFF

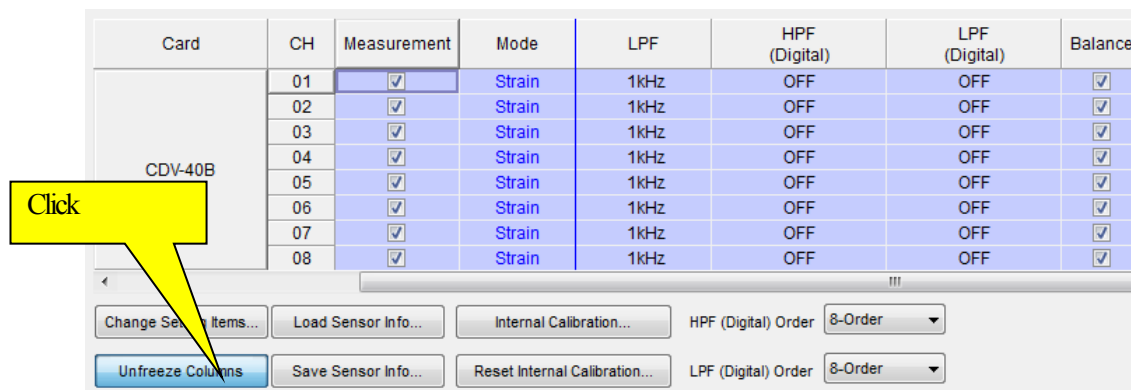
(5) Make sure the freeze columns do not move by scrolling.

Card	CH	Measurement	Mode	LPF	HPF (Digital)
CDV-40B	01	☒	Strain	1kHz	OFF
	02	☒	Strain	1kHz	OFF
	03	☒	Strain	1kHz	OFF
	04	☒	Strain	1kHz	OFF
	05	☒	Strain	1kHz	OFF
	06	☒	Strain	1kHz	OFF
	07	☒	Strain	1kHz	OFF
	08	☒	Strain	1kHz	OFF

Scroll horizontally

■ To unfreeze columns

(1) Click the **Unfreeze Columns** button as follows.



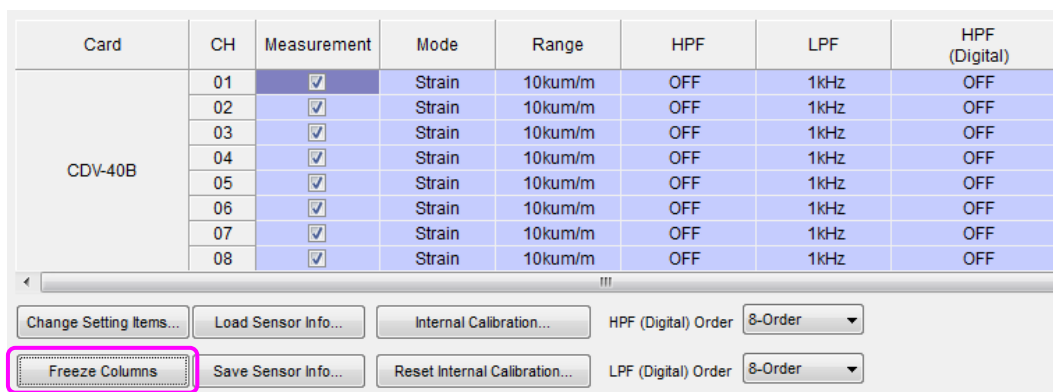
The screenshot shows a software window with a table of settings for a CDV-40B card. The table has columns: Card, CH, Measurement, Mode, LPF, HPF (Digital), LPF (Digital), and Balance. The 'Measurement' column is highlighted in blue. Below the table, there are several buttons: 'Change Setting Items...', 'Load Sensor Info...', 'Internal Calibration...', 'Unfreeze Columns' (highlighted with a yellow callout bubble labeled 'Click'), 'Save Sensor Info...', and 'Reset Internal Calibration...'. There are also dropdown menus for 'HPF (Digital) Order' and 'LPF (Digital) Order', both set to '8-Order'.

Card	CH	Measurement	Mode	LPF	HPF (Digital)	LPF (Digital)	Balance
CDV-40B	01	☒	Strain	1kHz	OFF	OFF	☒
	02	☒	Strain	1kHz	OFF	OFF	☒
	03	☒	Strain	1kHz	OFF	OFF	☒
	04	☒	Strain	1kHz	OFF	OFF	☒
	05	☒	Strain	1kHz	OFF	OFF	☒
	06	☒	Strain	1kHz	OFF	OFF	☒
	07	☒	Strain	1kHz	OFF	OFF	☒
	08	☒	Strain	1kHz	OFF	OFF	☒

(2) The blue line disappears.

The **Unfreeze Columns** button changes to the **Freeze Columns** button.

Make sure the unfreeze columns move by scrolling.



The screenshot shows the same software window as before, but the 'Freeze Columns' button is now highlighted with a pink box. The 'Measurement' column is no longer highlighted in blue. The table now includes a 'Range' column. The 'HPF (Digital)' and 'LPF (Digital)' columns are also present. The 'Freeze Columns' button is highlighted with a pink box.

Card	CH	Measurement	Mode	Range	HPF	LPF	HPF (Digital)
CDV-40B	01	☒	Strain	10kum/m	OFF	1kHz	OFF
	02	☒	Strain	10kum/m	OFF	1kHz	OFF
	03	☒	Strain	10kum/m	OFF	1kHz	OFF
	04	☒	Strain	10kum/m	OFF	1kHz	OFF
	05	☒	Strain	10kum/m	OFF	1kHz	OFF
	06	☒	Strain	10kum/m	OFF	1kHz	OFF
	07	☒	Strain	10kum/m	OFF	1kHz	OFF
	08	☒	Strain	10kum/m	OFF	1kHz	OFF

8-4 To save/load the sensor information file

This section describes how to save the sensor channel conditions, such as the calibration constant, rated capacity, rated output, etc., as the sensor information file (CSV format file). You are able to load the sensor information file for setting the channel conditions.

8-4-1 To save the sensor information

This section describes how to save the sensor channel conditions, as the sensor information file, into the CSV format file.

The sensor channel conditions are following 8 items.

- ①CH No.
- ②CH name
- ③Measurement ON/OFF
- ④Calibration constant
- ⑤Rated capacity
- ⑥Rated Output
- ⑦Offset
- ⑧Unit

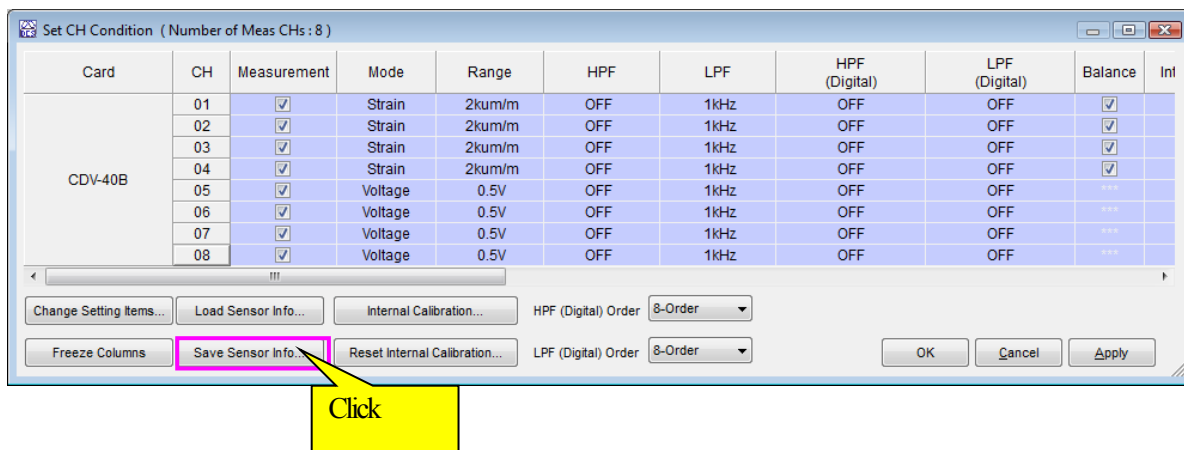
NOTE

Do not use commas in the channel name.

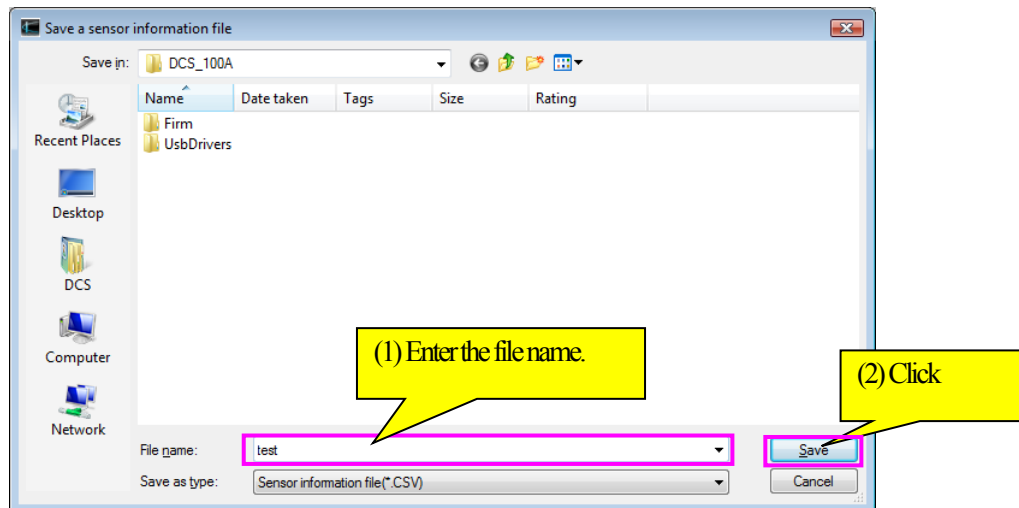
Since the sensor information file uses commas as delimiter, the DCS-100A is not able to load the channel name correctly if a comma is included.

8-4-1-1 To save

(1)Click the **Save Sensor Info...** button on the Set CH Condition window to open the Save sensor information window

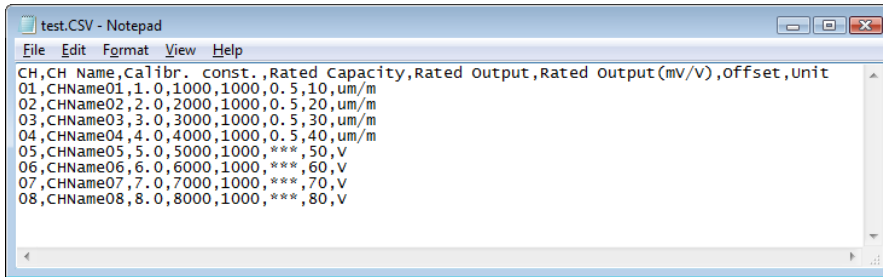


(2) Select the Data Save Folder, enter the File name and click the **Save** button.



8-4-2 To create the sensor information file

This section describes how to create the original sensor information file on the Microsoft Excel or text editor.



Example of the sensor information file

MEMO

Restrictions on the sensor information file.

File format	CSV (comma-delimited)
The number of rows	Up to 1000
The number of columns	The character string/line should be 256 bytes or less.
Be sure to describe the channel condition items on the first line of the file.	

8-4-2-1 Available channel condition items

The available channel condition items are following 8 items.

- ①CH
- ②CH name
- ③Measurement ON/OFF
- ④Calibration constant
- ⑤Rated capacity
- ⑥Rated Output
- ⑦Offset
- ⑧Unit

Microsoft Excel - test.CSV

File Edit View Insert Format Tools Data Window Help

Type a question for help

100%

Arial 10

B I U

CH

CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
1	CHName01	1	1000	1000	0.5	10	um/m
2	CHName02	2	2000	1000	0.5	20	um/m
3	CHName03	3	3000	1000	0.5	30	um/m
4	CHName04	4	4000	1000	0.5	40	um/m
5	CHName05	5	5000	1000	***	50	V
6	CHName06	6	6000	1000	***	60	V
7	CHName07	7	7000	1000	***	70	V
8	CHName08	8	8000	1000	***	80	V

test

Ready

Be sure to describe the channel condition items on the first line.

MEMO

The order of the channel condition items is not specified.

You do not need to describe all 8 channel condition items.

When the same channel condition items exist, the DCS-100A loads the left item prior to the right item for loading the sensor information.

8-4-2-2 Available sensor information

The DCS-100A describes each channel condition information from the second line of the sensor information file.

CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
1	CHName01	1	1000	1000	0.5	10	um/m
2	CHName02	2	2000	1000	0.5	20	um/m
3	CHName03	3	3000	1000	0.5	30	um/m
4	CHName04	4	4000	1000	0.5	40	um/m
5	CHName05	5	5000	1000	***	50	V
6	CHName06	6	6000	1000	***	60	V
7	CHName07	7	7000	1000	***	70	V
8	CHName08	8	8000	1000	***	80	V

The available sensor information is as follows.

Channel condition items	Available sensor information
CH	No limit
CH name	Character string (40 characters)
Calibration constant	Numerical value (-1×10^8 to 1×10^{-8} , 1×10^{-8} to 1×10^8)
Rated capacity	
Rated Output	
Offset	Numerical value (-1×10^8 to 1×10^{-8} , 0, 1×10^{-8} to 1×10^8)
Unit	Unit (For details, see "KS2 FILE FORMAT INSTRUCTION MANUAL.")

To use the rated capacity and rated output in the STRAIN MODE, be sure to describe the rated output (mV/V).
[Example] 0.5 mV/V

NOTE

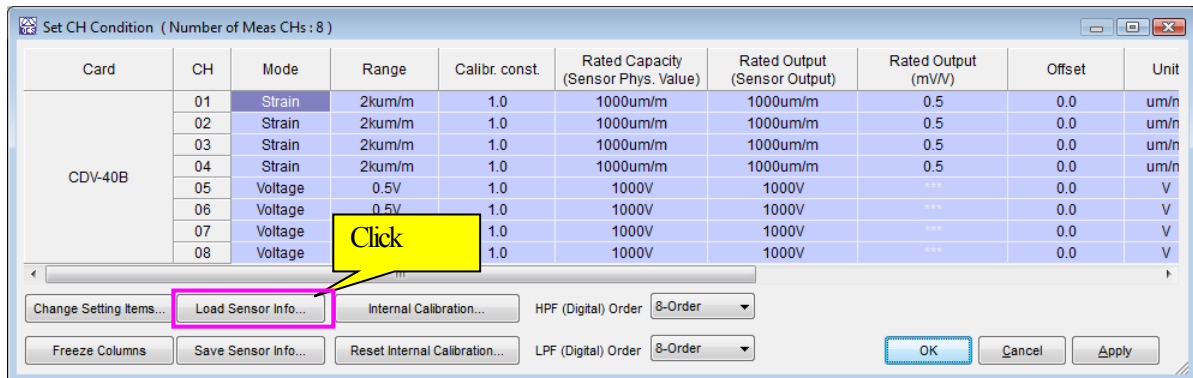
Unit varies with the measuring instrument.

NTB-500A	S.I. system of units
UDAS-100A	Standard Unit System or S.I. system of units
Others	Standard Unit System

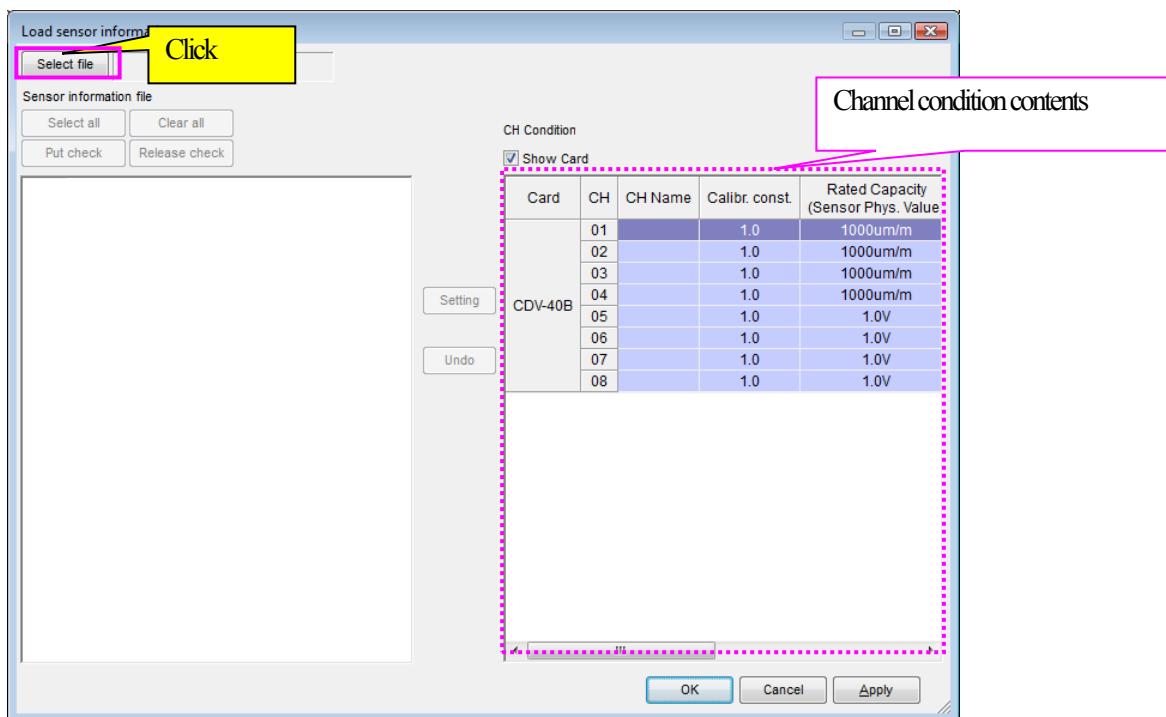
8-4-3 To load the sensor information file

You are able to load the sensor information file for setting the channel conditions.

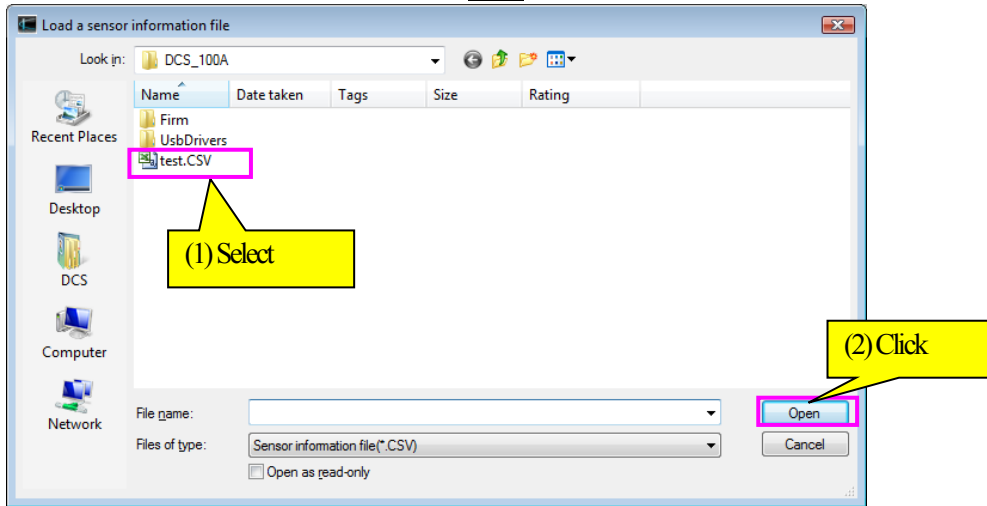
- (1) Click the **Load Sensor Info...** button on the Set CH Condition window to open the Load sensor information window



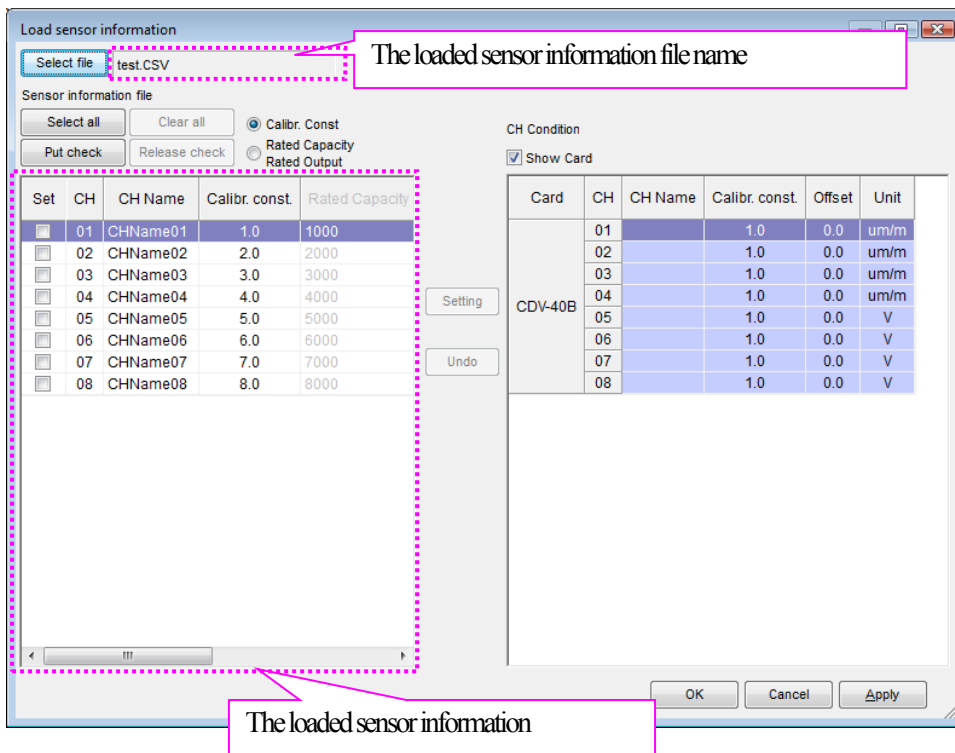
- (2) Click the **Select file** button on the Load sensor information window.



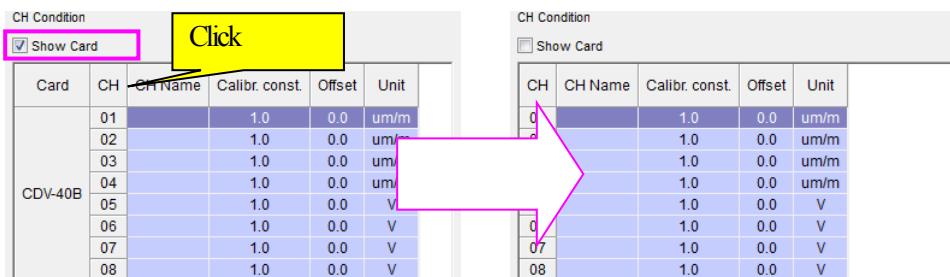
(3) Select the target sensor information file and click the **Open** button.



(4) After the loading succeeded, contents in the sensor information file appear.



To hide the "Card" column on the Set CH Condition window, release a check mark from the check box next to the "Show card."



The check box name varies with the measuring instrument.

[Example]

Suppose the target measuring instrument is NTB-500A.

The "Show unit" appears

8-4-4 To select the setting items

This section describes how to select the target sensor information.

The first line contents of the loaded sensor information file appears in the first line of the sensor information table.
The first line of the sensor information table is the target's channel condition items.

Select filetest.CSV

Sensor information file

Select all

Clear all

Put check

Release check

☒ Calibr. Const

☐ Rated Capacity

☐ Rated Output

Set	CH	CH Name	Calibr. const.	Rated Capacity
☒	01	CHName01	1.0	1000
☐	02	CHName02	2.0	2000
☐	03	CHName03	3.0	3000
☐	04	CHName04	4.0	4000
☐	05	CHName05	5.0	5000
☐	06	CHName06	6.0	6000
☐	07	CHName07	7.0	7000
☐	08	CHName08	8.0	8000

The first line contents of the loaded sensor information file
Target's channel condition items

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
☒	01	CHName01	1.0	1000	1000	0.5	10	um/m
☐	02	CHName02	2.0	2000	1000	0.5	20	um/m
☐	03	CHName03	3.0	3000	1000	0.5	30	um/m
☐	04	CHName04	4.0	4000	1000	0.5	40	um/m
☐	05	CHName05	5.0	5000	1000	***	50	V
☐	06	CHName06	6.0	6000	1000	***	60	V
☐	07	CHName07	7.0	7000	1000	***	70	V
☐	08	CHName08	8.0	8000	1000	***	80	V

Setting

Undo

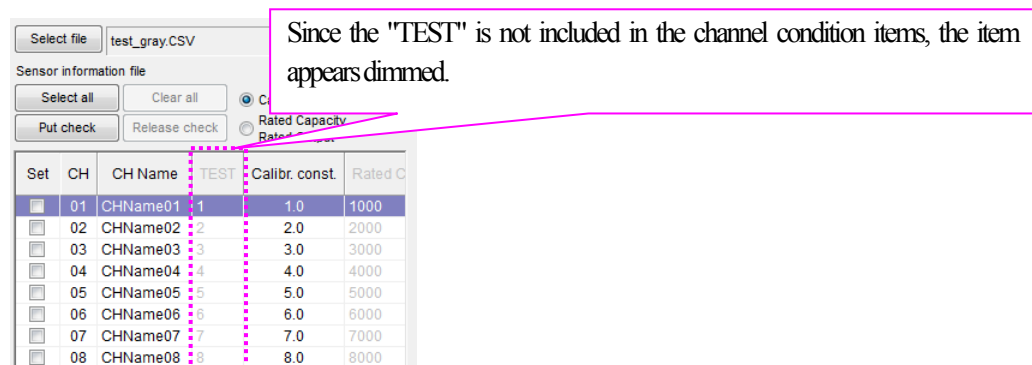
Card	CH	CH Name	Calibr. const.	Offset	Unit
CDV-40B	01		1.0	0.0	um/m
	02		1.0	0.0	um/m
	03		1.0	0.0	um/m
	04		1.0	0.0	um/m
	05		1.0	0.0	V
	06		1.0	0.0	V
	07		1.0	0.0	V
	08		1.0	0.0	V

MEMO

The DCS-100A will not set the "CH" item as the channel conditions.

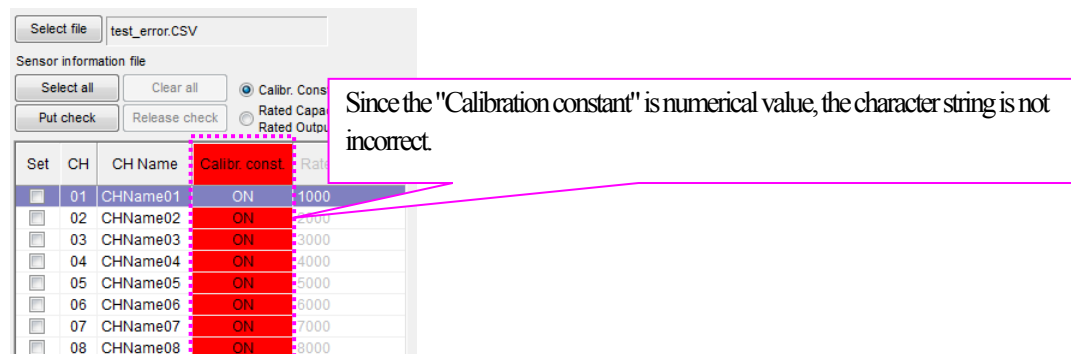
When the item is not included in the channel conditions item, the item appears dimmed as follows.

The DCS-100A will not set the dimmed item as the channel conditions.



When the content of the sensor information is incorrect, the item appears in red.

The DCS-100A will not set the red item as the channel conditions.



The available sensor information is as follows.

Setting Items	Available sensor information
CH name	Character string (40 characters)
Calibration constant	Numerical value (-1×10^8 to -1×10^{-8} , 1×10^{-8} to 1×10^8)
Rated capacity	
Rated Output	
Offset	Numerical value (-1×10^8 to 1×10^{-8} , 0 , 1×10^{-8} to 1×10^8)
Unit	Unit (For details, see "KS2 FILE FORMAT INSTRUCTION MANUAL.")

8-4-4-1 To select the calibration constant, rated capacity, and rated output.

When the loaded sensor information file includes the calibration constant, rated capacity, and rated output, the Calibr. Const button and Rated Capacity/Rated Output button appear as follows

To select the calibration constant, rated capacity, and rated output, click the target button.

Click

Screenshot 1: Initial State

Sensor information file: test.CSV

Buttons: Select all, Clear all, Put check, Release check

Calibr. Const (selected), Rated Capacity, Rated Output

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
01	CHName01	1.0	1000	1000	0.5	10	um/m	
02	CHName02	2.0	2000	1000	0.5	20	um/m	
03	CHName03	3.0	3000	1000	0.5	30	um/m	
04	CHName04	4.0	4000	1000	0.5	40	um/m	
05	CHName05	5.0	5000	1000	***	50	V	
06	CHName06	6.0	6000	1000	***	60	V	
07	CHName07	7.0	7000	1000	***	70	V	
08	CHName08	8.0	8000	1000	***	80	V	

CH Condition: ☒ Show Card

Card	CH	CH Name	Calibr. const.	Offset	Unit
CDV-40B	01	CHName01	1.0	0.0	um/m
CDV-40B	02	CHName02	1.0	0.0	um/m
CDV-40B	03	CHName03	1.0	0.0	um/m
CDV-40B	04	CHName04	1.0	0.0	um/m
CDV-40B	05	CHName05	1.0	0.0	um/m
CDV-40B	06	CHName06	1.0	0.0	um/m
CDV-40B	07	CHName07	1.0	0.0	um/m
CDV-40B	08	CHName08	1.0	0.0	um/m

Screenshot 2: Selected State

Sensor information file: test.CSV

Buttons: Select all, Clear all, Put check, Release check

Calibr. Const, Rated Capacity (selected), Rated Output

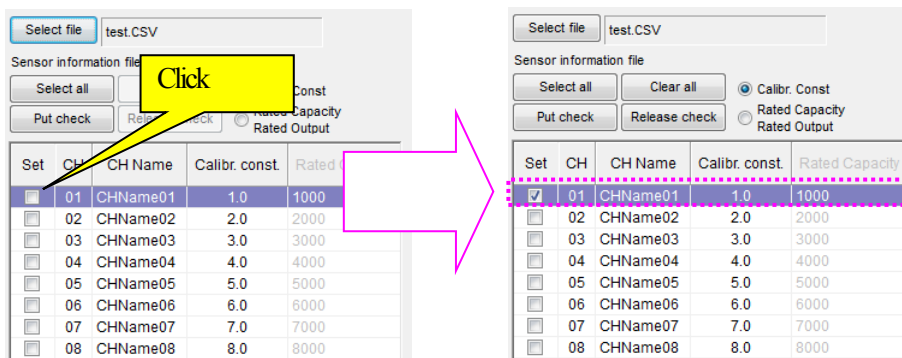
Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
01	CHName01	1.0	1000	1000	0.5	10	um/m	
02	CHName02	2.0	2000	1000	0.5	20	um/m	
03	CHName03	3.0	3000	1000	0.5	30	um/m	
04	CHName04	4.0	4000	1000	0.5	40	um/m	
05	CHName05	5.0	5000	1000	***	50	V	
06	CHName06	6.0	6000	1000	***	60	V	
07	CHName07	7.0	7000	1000	***	70	V	
08	CHName08	8.0	8000	1000	***	80	V	

CH Condition: ☒ Show Card

Card	CH	CH Name	Rated Capacity (Sensor Phys. Value)	Rated Output (Sensor Output)	Rated Output (mV/V)	Offset	Unit
CDV-40B	01	CHName01	1000um/m	1000	0.5	0.0	um/m
CDV-40B	02	CHName02	1000um/m	1000	0.5	0.0	um/m
CDV-40B	03	CHName03	1000um/m	1000	0.5	0.0	um/m
CDV-40B	04	CHName04	1000um/m	1000	0.5	0.0	um/m
CDV-40B	05	CHName05	1000um/m	1000	0.5	0.0	um/m
CDV-40B	06	CHName06	1000um/m	1000	0.5	0.0	um/m
CDV-40B	07	CHName07	1000um/m	1000	0.5	0.0	um/m
CDV-40B	08	CHName08	1000um/m	1000	0.5	0.0	um/m

8-4-4-2 Direct selection

Click the check box next to the target "Set" to be set in the channel conditions.



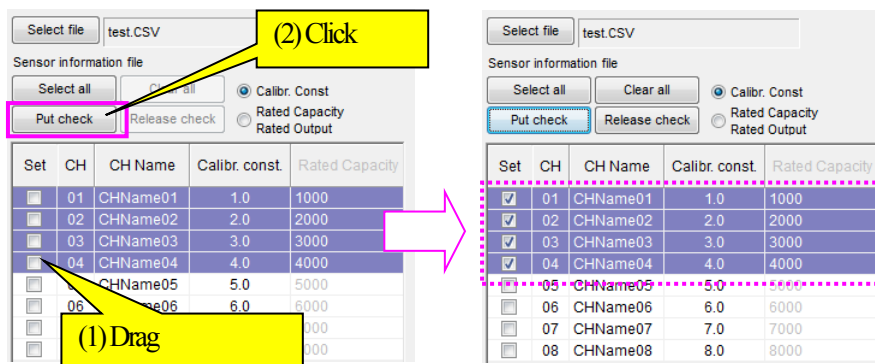
To release the check mark, click the check box.

8-4-4-3 Multiple selection

There are 2 ways to put/release multiple check marks on/from multiple check boxes; by using buttons and by using right-click.

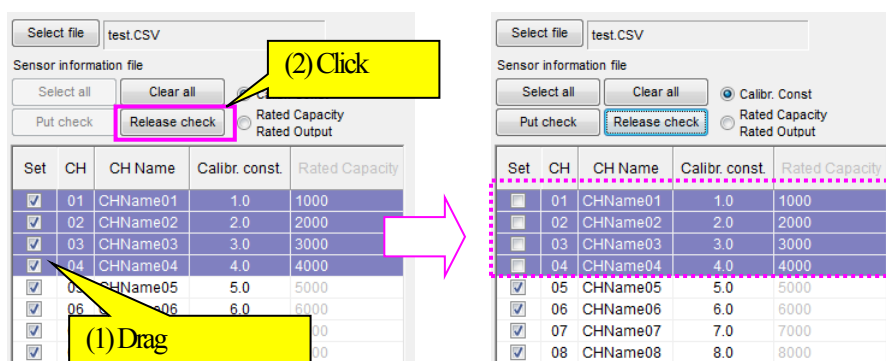
• Multiple Selection By Using Buttons

- (1) Drag the target rows.
- (2) Click the **Select all** button.



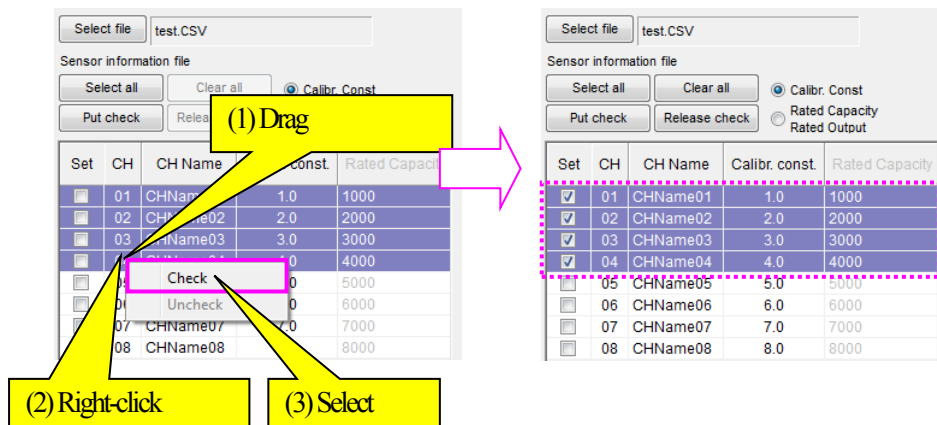
• Cancellation By Using Buttons

- (1) Drag the target rows.
- (2) Click the **Release check** button.



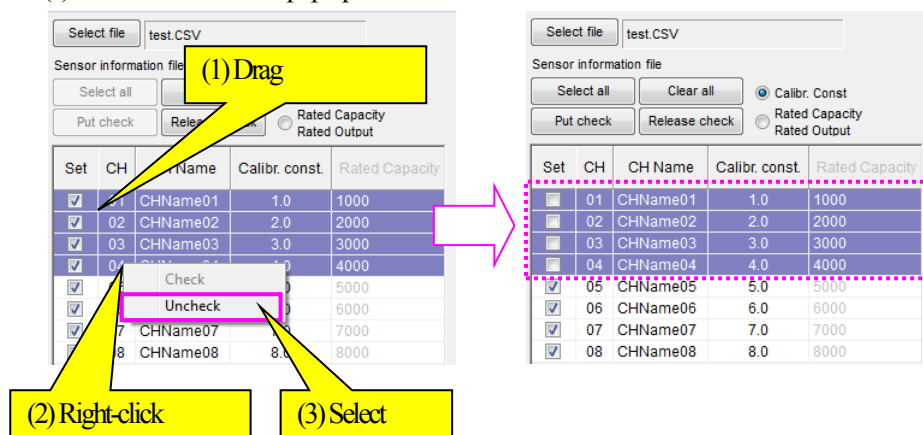
- Multiple Selection By Using Right-click

- (1) Drag the target rows.
- (2) Click the right mouse button on the window.
- (3) Select Check on the pop-up-menu.



- Cancellation By Using Right-click

- (1) Drag the target rows.
- (2) Click the right mouse button on the window.
- (3) Select Uncheck on the pop-up-menu.



8-4-4-4 Select all

You can put/release check marks on all boxes by one-click operation.

- Put check marks on all boxes

To put check marks on all boxes, click the **Select all** button.

The diagram illustrates the process of selecting all rows in a table. On the left, the 'Select all' button is highlighted with a yellow callout box labeled 'Click'. A pink arrow points from this button to the right-hand interface. In the right-hand interface, the 'Select all' button is no longer highlighted, but all checkboxes in the 'Set' column of the table are now checked. The table has 8 rows, each with a 'Set' checkbox, 'CH', 'CH Name', 'Calibr. const.', and 'Rated Capacity' columns.

Set	CH	CH Name	Calibr. const.	Rated Capacity
☒	01	CHName01	1.0	1000
☒	02	CHName02	2.0	2000
☒	03	CHName03	3.0	3000
☒	04	CHName04	4.0	4000
☒	05	CHName05	5.0	5000
☒	06	CHName06	6.0	6000
☒	07	CHName07	7.0	7000
☒	08	CHName08	8.0	8000

- Release check marks on all boxes

To release check marks on all boxes, click the **Clear all** button.

The diagram illustrates the process of clearing all checkboxes in the table. On the left, the 'Clear all' button is highlighted with a yellow callout box labeled 'Click'. A pink arrow points from this button to the right-hand interface. In the right-hand interface, the 'Clear all' button is no longer highlighted, and all checkboxes in the 'Set' column of the table are now unchecked. The table structure remains the same as in the previous diagram.

Set	CH	CH Name	Calibr. const.	Rated Capacity
☐	01	CHName01	1.0	1000
☐	02	CHName02	2.0	2000
☐	03	CHName03	3.0	3000
☐	04	CHName04	4.0	4000
☐	05	CHName05	5.0	5000
☐	06	CHName06	6.0	6000
☐	07	CHName07	7.0	7000
☐	08	CHName08	8.0	8000

8-4-5 To set the sensor information as the channel conditions

This section describes how to set the sensor information, with a check mark, as the channel conditions by clicking the **Setting** button. The DCS-100A sets the sensor information as the channel conditions, from the cursor position and below.

Click

Setting

Cursor position

Done

After setting the "Done" mark appears.

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
☒	01	CHName01	1.0	1000	1000	0.5	10	um/m
☒	02	CHName02	2.0	2000	1000	0.5	20	um/m
☒	03	CHName03	3.0	3000	1000	0.5	30	um/m
☒	04	CHName04	4.0	4000	1000	0.5	40	um/m
☐	05	CHName05	5.0	5000	1000	***	50	V
☐	06	CHName06	6.0	6000	1000	***	60	V
☐	07	CHName07	7.0	7000	1000	***	70	V
☐	08	CHName08	8.0	8000	1000	***	80	V

Card	CH	CH Name	Calibr. const.	Offset	Unit
CDV-40B	01	CHName01	1.0	10	um/m
	02	CHName02	2.0	20	um/m
	03	CHName03	3.0	30	um/m
	04	CHName04	4.0	40	um/m
	05		1.0	0.0	um/m
	06		1.0	0.0	um/m
	07		1.0	0.0	um/m
	08		1.0	0.0	um/m

Setting

Undo

To cancel the last setting action, click the **Undo** button. (Undo function)
You can only undo once.

Note that the DCS-100A will not set the item, with the "Done" mark, as the channel conditions although you click the **Setting** button. When you overwrite the sensor information on the channel conditions, the pre-set "Done" mark disappears and a new "Done" mark appears next to the newly set sensor information.

Click

Setting

Cursor position

After overwriting the "Done" mark disappears.

Setting

Undo

After setting the "Done" mark appears.

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output(mV/V)	Offset	Unit
Done	01	CHName01	1.0	1000	1000	0.5	10	um/m
Done	02	CHName02	2.0	2000	1000	0.5	20	um/m
Done	03	CHName03	3.0	3000	1000	0.5	30	um/m
Done	04	CHName04	4.0	4000	1000	0.5	40	um/m
	05	CHName05	5.0	5000	1000	***	50	V
	06	CHName06	6.0	6000	1000	***	60	V
	07	CHName07	7.0	7000	1000	***	70	V
✓	08	CHName08	8.0	8000	1000	***	80	V

CH	CH Name	Calibr. const.	Offset	Unit
01	CHName01	1.0	10	um/m
02	CHName02	2.0	20	um/m
03	CHName03	3.0	30	um/m
04	CHName04	4.0	40	um/m
05			0.0	um/m
06			0.0	um/m
07			0.0	um/m
08			0.0	um/m

Card	CH	CH Name	Calibr. const.	Offset	Unit
01	CHName08	8.0	80	V	
02	CHName02	2.0	20	um/m	
03	CHName03	3.0	30	um/m	
04	CHName04	4.0	40	um/m	
05		1.0	0.0	um/m	
06		1.0	0.0	um/m	
07		1.0	0.0	um/m	
08		1.0	0.0	um/m	

To delete the "Done" mark, open the sensor information file again or open the Load sensor information window again.

When the sensor information includes the rated output (mV/V), be sure to select the channel, including the rated output (mV/V), on the channel conditions.

When the sensor information includes the rated output (numerical value), be sure to select the channel, including the rated output (numerical value), on the channel conditions.

When setting the rated output (mV/V, sensor information) as the rated output (numerical value, channel conditions), the rated output (mV/V, sensor information) appears orange.

The DCS-100A will not set the orange item as the channel conditions.

Rated output (mV/V)

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output (mV/V)
☒	01	CHName01	1.0	1000	1000	0.5
☐	02	CHName02	2.0	2000	1000	0.5
☐	03	CHName03	3.0	3000	1000	0.5
☐	04	CHName04	4.0	4000	1000	0.5
☐	05	CHName05	5.0	5000	1000	***
☐	06	CHName06	6.0	6000	1000	***
☐	07	CHName07	7.0	7000	1000	***
☐	08	CHName08	8.0	8000	1000	***

Setting

Card	CH	CH Name	Rated Capacity (Sensor Phys. Value)	Rated Output (Sensor Output)	Rated Output (mV/V)	Offset	Unit
CDV-40B	01		1000um/m	1000	0.5	0.0	um/m
	02		1000um/m	1000	0.5	0.0	um/m
	03		1000um/m	1000	0.5	0.0	um/m
	04		1000um/m	1000	0.5	0.0	um/m
	05		1.0V	1.0	***	0.0	V
	06		1.0V	1.0	***	0.0	V
	07		1.0V	1.0	***	0.0	V
	08		1.0V	1.0	***	0.0	V

Setting

Undo

Set	CH	CH Name	Calibr. const.	Rated Capacity	Rated Output	Rated Output (mV/V)
Done	01	CHName01	1.0	1000	1000	0.5
☐	02	CHName02	2.0	2000	1000	0.5
☐	03	CHName03	3.0	3000	1000	0.5
☐	04	CHName04	4.0	4000	1000	0.5
☐	05	CHName05	5.0	5000	1000	***
☐	06	CHName06	6.0	6000	1000	***

Setting

Undo

Card	CH	CH Name	Rated Capacity (Sensor Phys. Value)	Rated Output (Sensor Output)	Rated Output (mV/V)	Offset	Unit
CDV-40B	01		1000um/m	1000	0.5	0.0	um/m
	02		1000um/m	1000	0.5	0.0	um/m
	03		1000um/m	1000	0.5	0.0	um/m
	04		1000um/m	1000	0.5	0.0	um/m
	05	CHName01	1.0um/m	1.0	***	1.0	um/m
	06		1.0V	1.0	***	0.0	V
	07		1.0V	1.0	***	0.0	V
	08		1.0V	1.0	***	0.0	V

The rated output (mV/V, sensor information) appears orange
The DCS-100A will not set the item as the channel conditions.

The DCS-100A will set the items, excluding the rated capacity and rated output.

The same thing occurs when setting the rated output (numerical value, sensor information) as the rated output (mV/V, channel conditions).

9. Other software operations

9-1 To register/start up DAS-200A

When the Kyowa's DAS-200A (or DIAdem) is installed in your PC, you are able to start up the DAS-200A (or DIAdem) by using the DCS-100A.

9-1-1 To register DAS-200A

This section describes how to register DAS-200A and DIAdem on the DCS-100A menu and tool bar.

■ To register DAS-200A manually

Select the DAS-200A exe file, saved in the hard disk, manually for registration.

- (1) DAS-200A: Click the File - DAS-200A - Refer to DAS-200A...
- DIAdem: Click the DIAdem - Refer to DIAdem...
- (2) DAS-200A: The Refer to DAS-200A (DAS200A.EXE) window appears.
Select the DAS200A.EXE and click the button for registration.
- DIAdem: The Refer to DIAdem(DIADDEM.EXE) window Appears.
Select the DIAdem.EXE and click the button for registration.

■ To register DAS-200A automatically

Select the DAS-200A exe file (or DIAdem exe file), saved in the hard disk, Automatically for registration.

- (1) DAS-200A: Click the File - DAS-200A- Find DAS-200A.... for finding.
- DIAdm: Click the DIAdem - Find DIAdem.... for finding.
- (2) The completed message appears.
Click the button to register the DAS-200A on the menu and tool bar.

9-1-2 To start up DAS-200A

Start up the DCS-100A by any of the following.

- DAS-200A: Click the File - DAS-200A - DAS-200A Execute....
- DIAdem: Click the DIAdem - DIAdem execute....
- DAS-200A: Click the icon from the tool bar.
- DIAdem: Click the icon from the tool bar.

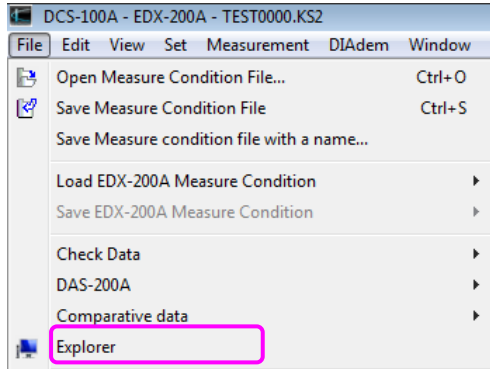
9-2 Explore

This section describes how to start up the Explore, with the Data File Save Folder opened, by using the DCS-100A. Explore enables you to delete the recorded data and enables you to copy the recorded data on the external media.

■ To start up Explore

Start up the Explore by any of the following.

- Click the File - Explore.



- Click the Explore icon from the tool bar.



10. SPECIFICATIONS

10-1 MONITOR DISPLAY

Y-Time graph	Physical variables are graphed on y axis with x axis for time. Up to 32 channels can be graphed and 1 to 10 graphs can be presented on a window.
Y-Time (DIV) graph	Physical variables are graphed on y axis with x axis for time. Up to 32 channels can be graphed Zero point of channel can freely be moved to a desired position on a division of y axis.
X-Y graph	Variables of desired 8 channels each for both x axis and y axis are graphed in free combination.
Bar graph	One bar graph can contain up to 32 channels and 1 to 4 graphs can be presented on a window. Peak hold ON/OFF is possible. (Capable of displaying peak values.)
Circular meter	Variable of 1 desired channel can be displayed on a circular meter.
Bar meter	Variable of 1 desired channel can be displayed on a horizontal or vertical bar meter.
Numeric window	Presents numeric data of 1, 16 channels, or all channels. (Capable of displaying max. and min. values of every CH.)
Over-input Indication	Capable of displaying the excessive channel values in red.
Graph scale	Capable of displaying auto-scale value and full-scale value on the Y-Time Graph (y axis), X-Y Graph (x axis and y axis), and Bar Graph (y axis). The Y-Time Graph (y axis) is able to change 1-axis, 2-axis and CH.
Display color	Freely changeable graph by graph.
Title and labels	A desired title and labels for x axis and y axis can be set.
Number of simultaneously displayed windows	32 numeric windows and 32 graph windows 64 in total, can simultaneously displayed. (including Numeric windows/Graph windows in data reproduction) Note that the number of windows may be restricted by the CPU speed and memory of the PC.
Auxiliary line	Capable of displaying the desired auxiliary line on the Y-Time Graph (x axis and y axis), X-Y Graph (x axis and y axis), and Bar Graph (x axis and y axis). (Up to 4 auxiliary lines each for both x axis and y axis.)
Dual display	Capable of moving the Numeric windows/Graph windows onto the sub window.

10-2 SETTING CHANNEL/MEASURING CONDITIONS

Channel/measuring conditions	Applied recorder is set according to the specifications.
TEDS information	Used to automatically set the applied recorder according to the conditions read from TEDS. (TEDS compatible recorders only)
Saving and loading measurement conditions	Capable of saving and loading measurement conditions.
Capable of saving and loading the sensor information file (CSV format file) on the channel conditions.	

10-3 SETTING ENVIRONMENT

Destination of saving data	Measured data is saved in storage media of the controlled recorder. Also possible is direct saving in the hard disk of PC, while it is limited by the sampling frequency and the number of measuring channels.
Automatic transfer of data file	Data file can automatically be transferred to the hard disk of PC upon completion of recording.
Automatic transfer	Data file can automatically be transferred (CSV format, XLS format, XLSX format, or RPCIII format) upon completion of recording.
Optional units	3 user-defined units can be registered.
PAUSE function while recording data	PAUSE function ON/OFF is possible.

10-4 DATA FILE

Saving format	KYOWA standard file format KS2
File coupling	Data files saved in controlled recorders operated in synchronization can be combined to a single data file at the time of collection by the PC.

10-5 CHECKING DATA

Y-Time Graph	Physical variables are graphed on y axis with x axis for time. Up to 32 channels can be graphed and 1 to 10 graphs can be presented on a window.
Y-Time (DIV) Graph	Physical variables are graphed on y axis with x axis for time. Up to 32 channels can be graphed Zero point of channel can freely be moved to a desired position on a division of y axis.
X-Y Graph	Variables of desired 8 channels each for both x axis and y axis are graphed in free combination.
Numeric window	Presents numeric data in a list.
Graph scale	Capable of displaying auto-scale value and full-scale value on the Y-Time Graph (y axis), X-Y Graph (x axis and y axis), and Bar Graph (y axis). The Y-Time Graph (y axis) is able to change 1-axis, 2-axis and CH.
Display color	Freely changeable graph by graph.
Title and labels	A desired title and labels for x axis and y axis can be set.
Number of simultaneously displayed windows	32 numeric windows and 32 graph windows, 64 in total, can simultaneously displayed. (including Numeric windows/Graph windows in monitor) *Note that the number of windows may be restricted by the CPU speed and memory of the PC.
Size of data file available on a single screen	The size of the data file which can be displayed at a time on Numeric windows/Graph windows is maximum 10 MB. If the file size exceeds 10 MB, 10 MB data of a desired portion can be displayed by setting the range.
File conversion	Desired range or data of a desired channel can be cropped and converted to CSV, XLS, XLSX, or RPCIII format file.
Auxiliary line	Capable of displaying the desired auxiliary line on the Y-Time Graph (x axis and y axis), X-Y Graph (x axis and y axis), and Bar Graph (x axis and y axis). (Up to 4 auxiliary lines each for both x axis and y axis.)
Maximum value/minimum value/average value	Capable of displaying the maximum value/minimum value/average value within the window on the Y-Time Graph.

(Capable of displaying the maximum value/minimum value/average value when the number of channels is 1 or 2.)

Dual display

Capable of moving the Numeric windows/Graph windows onto the sub window.

10-6 SYSTEM REQUIREMENTS

OS	Windows 8.1, Windows10, Windows11 Japanese/English, 32-bit/64-bit version (Windows 11 is 64-bit Only) For the 64-bit OS, WOW64(Windows 32-bit On Windows 64-bit).
CPU	Core i5 2 GHz or more
Memory	For 32-bit OS, 2 GB or more. For 64-bit OS, 4 GB or more.
Display	Resolution: 1024 × 768 dots or more

Note:

- The PCD-300 series is not Windows8/8.1 compliant.
Do not connect the PCD-300 series to the USB3.0 port. Or ,the PCD-300 series will not operate properly.
- LAN Interface :100Bace-TX or more.