

Magnescale®

Software

MGS USB Gauge Monitor

Thank you for purchasing this Magnescale product.
Read all the instructions in the manual carefully before use and strictly follow them.
Be sure to keep this manual for future reference.

This instruction manual corresponds to the software Ver. 1.0.

Instruction Manual

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Note

The text and display screens of this instruction manual, with some exceptions, assume the use of a computer running Windows10. For other operating systems, there might be cases such as restricted functionalities and or different displays.

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1. Outline

1-1. Introduction

MGS USB Gauge Monitor is a Windows application software that displays the values measured by a measuring unit on a personal computer (hereafter “computer”) running the Windows OS. This software is used by connecting a compatible measuring unit to a computer on which the software has been downloaded. Download the software from the Magnescale website.

1-2. Major functions and features of the software

Measurement results display

- Present value, minimum value, maximum value, P-P value
- Go/No-go judgment
- Line chart, histogram

Connected measuring unit detail display

- Confirmation of target measuring unit (target measuring unit model, model name, serial number, and resolution)

Data output

- CSV format file output

1-3. Product configuration

Product	Description
Software	MGS USB Gauge Monitor Download MGS USB Gauge Monitor from the Magnescale website. This application software function is to display the measuring unit details, measurement results, and other information on a computer.

2. System environment and setup

2-1. Compatible system environment

2-1-1. Compatible measuring units

The following magnescales are compatible.

- DS Series

2-1-2. Computer environment

Item	Environment
CPU	Intel Core i3 or higher recommended*1
RAM	1 GB or higher recommended*1
OS	Windows 7 (32bit/64bit of each edition) Windows 10 (32bit/64bit of each edition)
Display	1280 × 800 pixels or higher*1
USB	2.0

*1: It must satisfy the requirements of the OS.

2-1-3. Maximum number of measuring units that can be connected

Item	Environment
Number of measuring units that can be connected	Up to 32 (application performance guaranteed)

2-2. Software uninstallation

The following software programs, which are needed to run MGS USB Gauge Monitor, are also installed during this process.

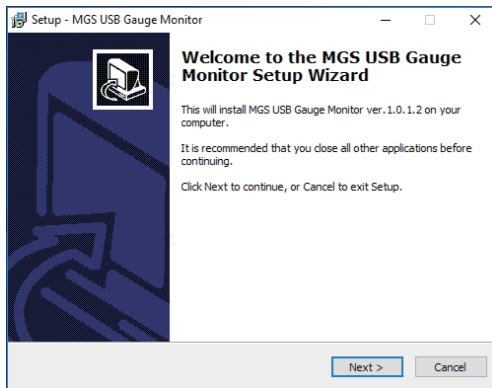
- Microsoft .NET Framework 4.5 (If already installed, this installation is omitted.)
- Microsoft Visual C++ 2008 SP1 Runtime
- STMicroelectronics Communication Device Class Driver

These software programs are not automatically uninstalled when MGS USB Gauge Monitor is uninstalled.

When uninstallation is necessary, uninstall each software separately.

- 1 Download MGS USB Gauge Monitor from the Magscale website.
- 2 Double-click the downloaded “MgsUsbGaugeMonitor_en_Vx.x.x.x.exe.”

The Welcome to the MGS USB Gauge Monitor Setup Wizard window appears.



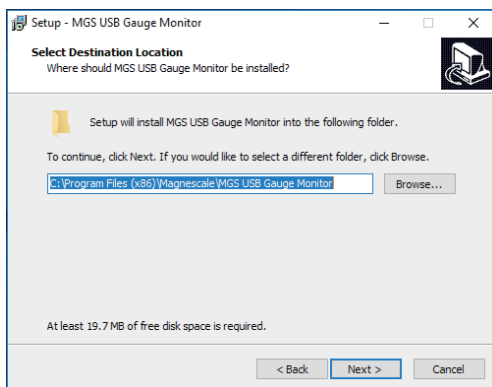
3 Click “Next>.”

The Software License Agreement appears.

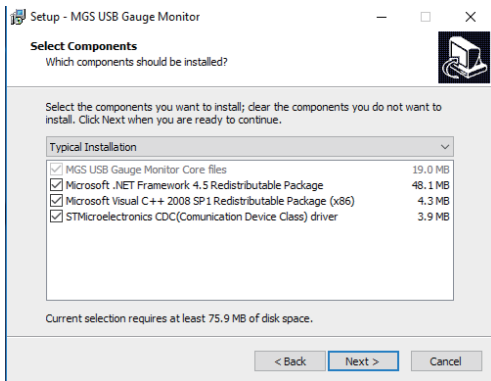
4 If you agree to the displayed license conditions, select “I accept the agreement” and then click “Next >.”



5 Select the install destination location and then click “Next >.”

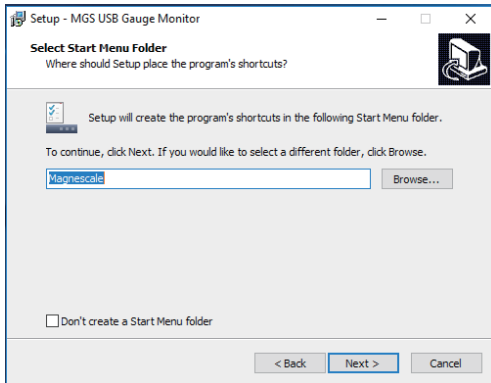


The Select Components window appears.



6 Click “Next >.”

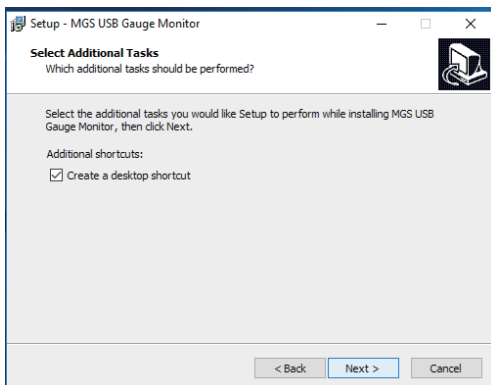
A window for the Start Menu display settings will appear.



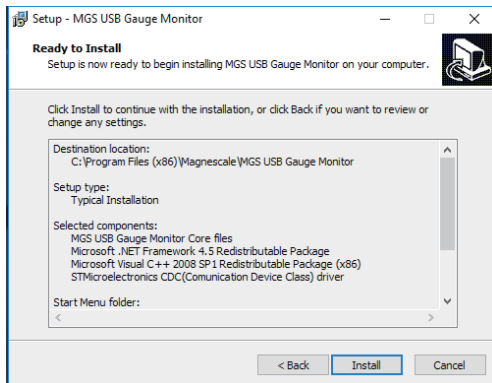
7 To display the application in the Start Menu, click “Next >.”

Otherwise, add a check mark to “Don’t create a Start Menu folder” and then click “Next >.”

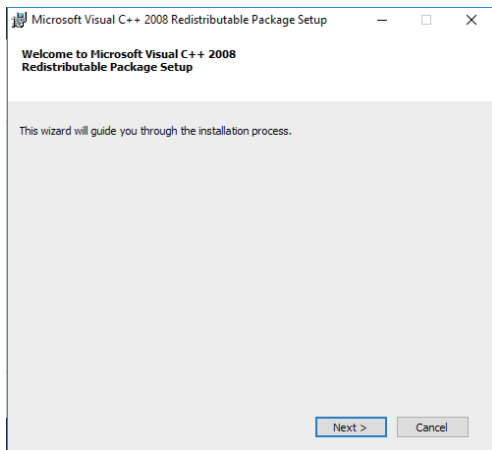
The Select Additional Tasks window appears.



- 8 Place a check mark in the “Create a desktop shortcut” check box and then click “Next >.”
The Ready to Install window appears.

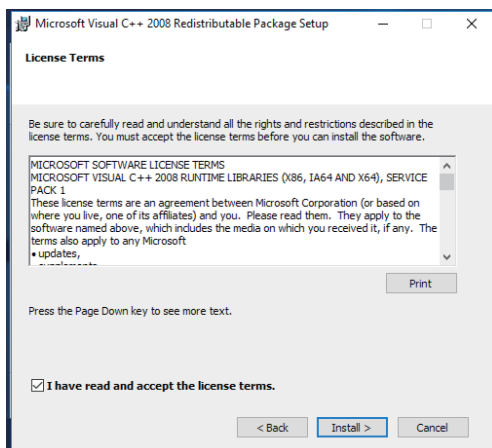


- 9 Click “Install.”
The Microsoft Visual C++ 2008 Setup window appears.



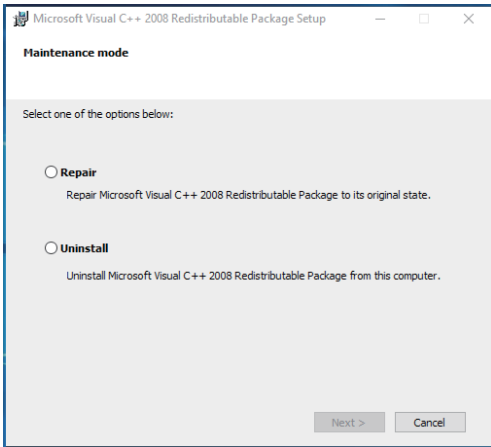
- 10 Click “Next >.”
The License Terms window appears.

- 11 If you agree to the displayed license terms, select “I have read and accept the license terms.” and then click “Install>.”

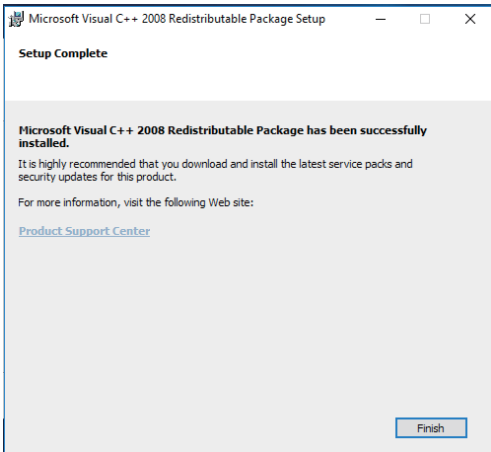


Installation starts.

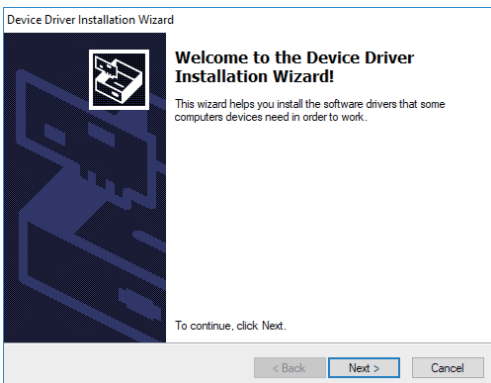
<If the software is already installed>
The Maintenance mode window appears.
Click “Cancel.”



12 When the Setup Complete window appears, click “Finish.”

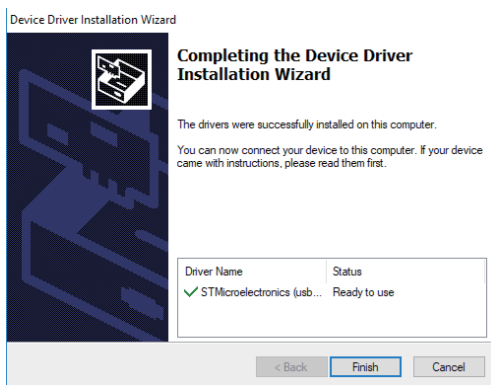


The Welcome to the Device Driver Installation Wizard! window appears.



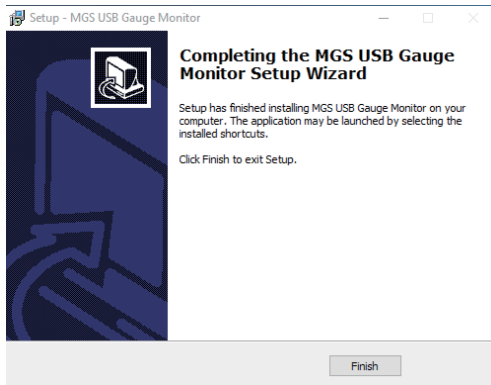
13 Click “Next >” in the Welcome to the Device Driver Installation Wizard! window.

14 When device driver installation is finished, the following window appears.



Click “Finish.”

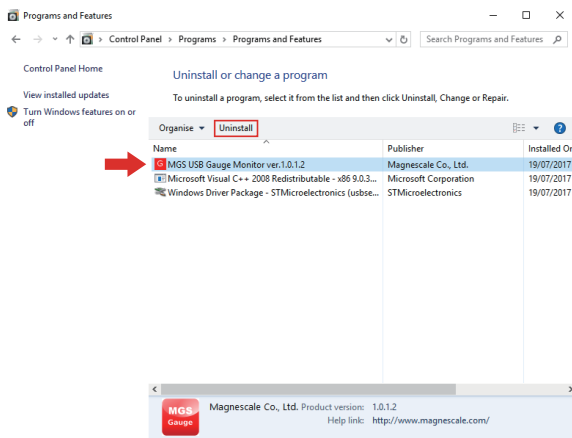
15 When the following window appears, click “Finish.”



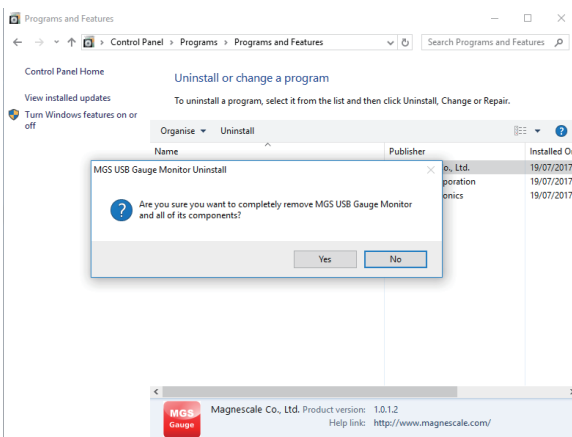
The installation is complete.

2-3. MGS USB Gauge Monitor uninstallation

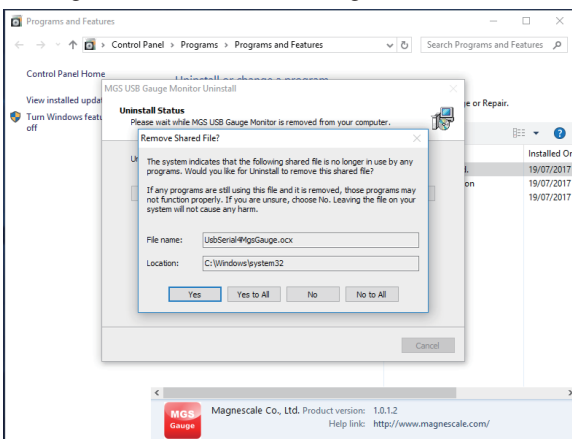
- 1 Click “Programs and Features” from the Control Panel of the computer.
- 2 Select “MGS USB Gauge Monitor” in the displayed list of software and then click the “Uninstall” displayed next to “Organise.”



- 3 The dialog box shown below appears.

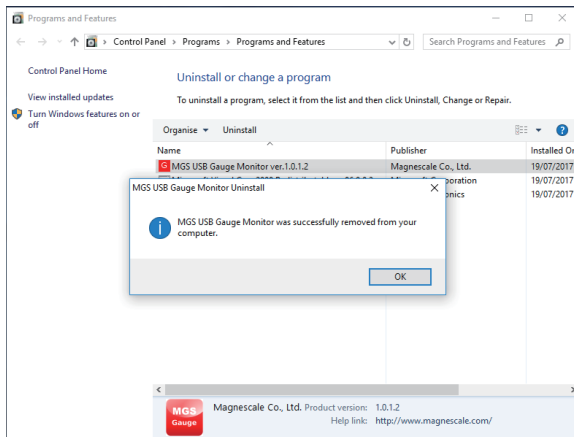


- 4 Confirm the message and click “Yes.”
An uninstallation progress bar appears during uninstallation.
- 5 During uninstallation, the dialog box shown below will appear.



Click “Yes to All.”

6 The dialog box shown below appears.
Click “OK.”

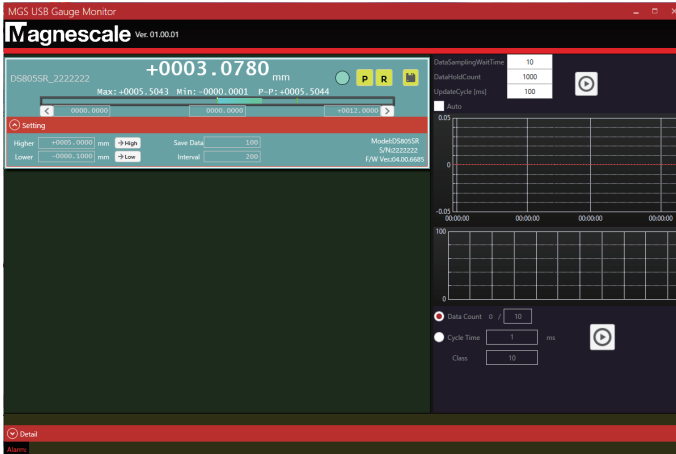


Check that “MGS USB Gauge Monitor” disappears from within “Programs and Features.” When it disappears, uninstallation is complete.

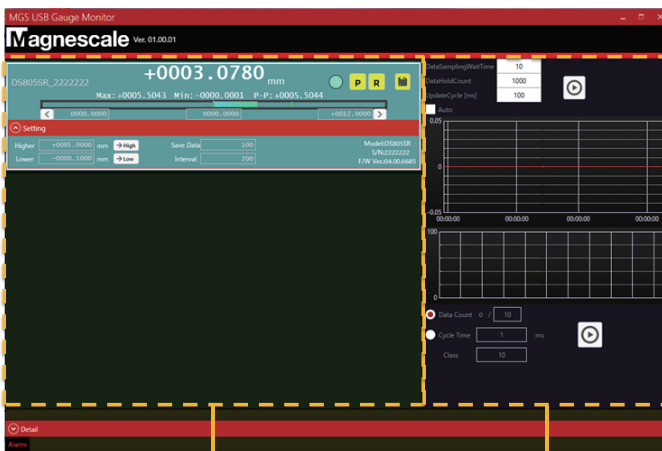
3. Software operation method

3-1. Starting up MGS USB Gauge Monitor

- 1 Click the shortcut icon created during installation.
MGS USB Gauge Monitor starts up.



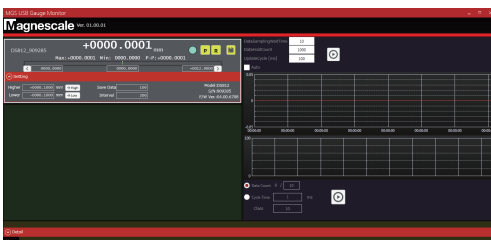
3-2. Description of window



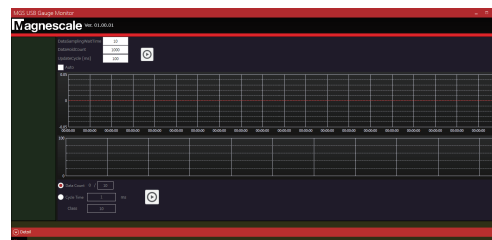
Connected measuring unit details

Present value and histogram display of target measuring unit

The connected measuring unit detail area displays the details for the number of measuring units currently recognized by the computer.
When no measuring units are connected, no details are displayed.

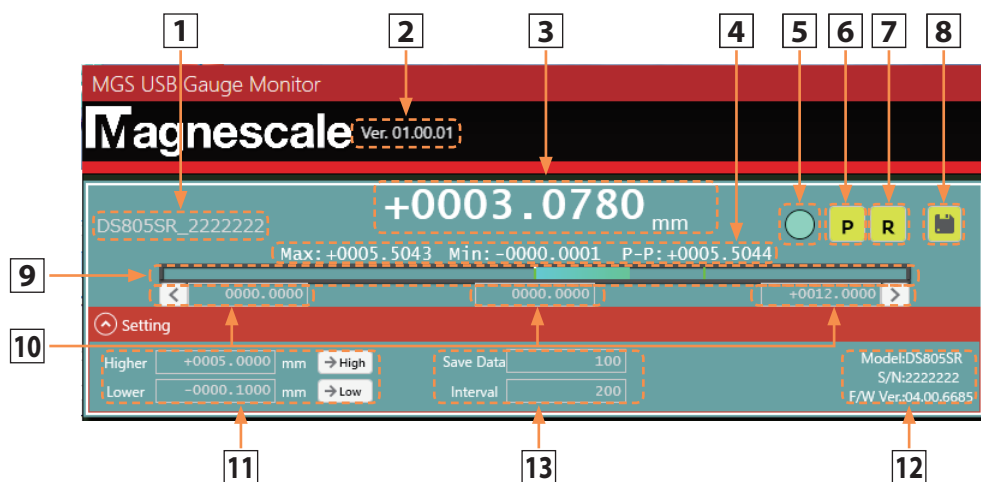


When measuring units are connected



When no measuring units are connected

3-2-1. Connected measuring unit detail area



No.	Name	Function
1	Measuring unit name	This displays the measuring unit's name.
2	Software version	This displays the installed MGS USB Gauge Monitor version.
3	Present value	This displays the measuring unit's present value.
4	Max, Min, P-P	These display the Maximum value, Minimum value, and Peak-Peak value (Maximum value - Minimum value) since the start of communication.
5	Judgment signal	This displays the present value judgment. Blue: Within the threshold values Red : Outside the threshold values
6	Preset button	This sets the displayed present value as the preset.
7	Reset button	This resets the present position, Maximum value, Minimum value, and P-P value.
8	Save button	This outputs the present value as CSV data. The data is output in accordance with the "Number of save data" setting.
9	Bar meter	This displays the present value with a bar meter. The bar meter color indicates whether the present value is within the threshold values. Blue: Within the threshold values Red : Outside the threshold values
10	Bar meter setting values	These set the upper limit, center, and lower limit values of the bar meter display. The current upper and lower limit values can be set using the </> buttons. The upper and lower limit values set here are applied, as is, to the Y-axis setting of the line chart.*1
11	Judgment threshold values	This sets the present value judgment standard values. Judgment is performed as Lower (lower limit value) ≤ Present value ≤ Higher (upper limit value). The current upper and lower limit values can be set using the buttons. The upper and lower limit values set here are applied as is to the threshold value displays (red lines) in the line chart.
12	Firmware information	This displays the model name, serial number and firmware version.
13	Number of save data	Enter the values for the number of data to be saved and the data sampling interval. Default values Save Data: 100 Interval : 200 [ms]*2

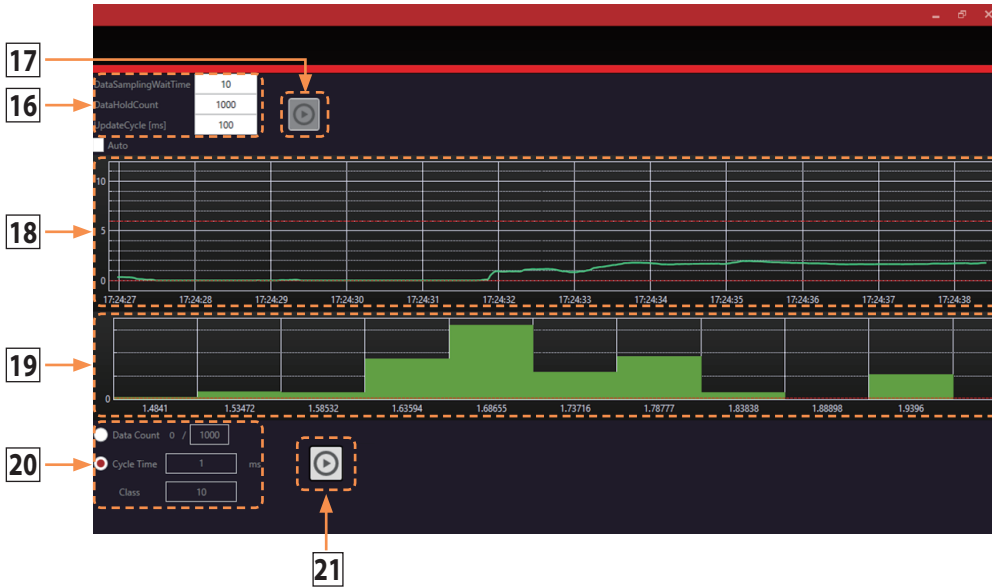
*1 Always enter values that satisfy the relationship Minimum value < Center value < Maximum value.
(If the relative sizes do not satisfy the above relationship, the display will not be correct.)

*2 Approximate header size within the Save Data size : 30 bytes
Approximately 50 bytes per data (500 Kbytes when 10,000 data)

3-2-2. Target measuring unit present value and histogram display area

This displays the present value and histogram of the measuring unit selected in the connected measuring unit detail area.

* The selected measuring unit is displayed with a green background in the connected measuring unit detail area.



No.	Name	Function
16	Line chart setting	These are used to make the line chart drawing settings. DataSamplingWaitTime Enter the data sampling interval (ms). Setting a shorter interval increases the communication speed, but also increases the load on the CPU.*3 DataHoldCount Enter the number of drawing points to be displayed by the line chart.*4 UpDateCycle[ms] Enter the line chart update cycle.*5 Auto When a check mark is placed in this check box, the Y-axis is set to auto-range. When this box does not have a check mark, the upper and lower limit values set by the "Bar meter setting values" item are automatically set.
17	Draw button	This starts and stops line chart drawing for the selected measuring unit.
18	Line chart	This displays the line chart graph. The red lines in the graph are the set upper and lower limit "Judgment threshold values."
19	Histogram	This displays the histogram.
20	Histogram setting	These are used to make the histogram drawing settings. Data Count When a check mark is placed in the "Data Count" check box, data can be sampled at the timing when the Draw button is clicked. Enter the number of samples (count) when using this function. Note: When the Draw button is clicked a number of times in excess of the value entered here, the data sampled thus far will be cleared.*6 Cycle Time When a check mark is placed in the "Cycle Time" check box, data can be sampled at the designated interval. Enter the sampling interval (ms). The histogram is drawn after sampling the data.*7 Class Enter the number of sample data divisions to set the number of histogram classes.*8
21	Draw button	This starts data sampling.

*3 At initial startup: 10 Input range: from 0

*4 At initial startup: 1000 Input range: from 50

*5 At initial startup: 100 Input range: from 50

*6 At initial startup: 10 Input range: from 0 (The setting value is applied the next time the software is started up.)

*7 At initial startup: 1 Input range: from 0

*8 At initial startup: 10 Input range: from 0

Note: When an input setting value is less than the input range, it is automatically changed to the minimum value of the input range.

4. Troubleshooting

4-1. A Measuring unit is not displayed.

Cause	Action
The measuring unit is not connected to the computer.	Check the connection. If the interpolator LED on the measuring unit lights up, the measuring unit is connected properly.
The driver is not installed.	Refer to “2-2 Software installation” and install the driver software.
The USB cable is too long.	The USB standard specifies that USB cables should be 5 m or shorter, including extensions. When using an extension cable, make sure that the total length is within the standard.
Noise is superposed onto the USB cable.	Keep the USB cable and computer as far as possible from sources of noise. When used in a noisy environment, noise may be superposed onto the USB cable and prevent normal communication.

4-2. The present value does not change.

Cause	Action
The measuring unit is not recognized properly.	Disconnect and reconnect the USB connector of the measuring unit to the computer. If the measuring unit still cannot be recognized properly, restart the software.

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