PT0E-2091

RIKEN KEIKI

Portable Gas Detector

9000 Series

Configuration Program

MT-9000 Series (EX)

Operating Manual

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About This Document

1-1 Introduction

The operating procedures and precautions described in this operating manual apply only for use in accordance with the stipulated purposes. Riken Keiki rejects all liability in cases involving use of the program in ways not described in this operating manual.

This operating manual omits descriptions of basic operations such as command selection and dialog box settings for Microsoft Windows 10, Microsoft Windows 11. If you are using Windows for the first time, read the Windows manual and familiarize yourself with basic Windows operations before proceeding.

1-2 Program purpose and features

This software program is used to check and edit the internal settings of 9000 Series Portable Gas Detectors (GX-9000/GX-9000H).

- Unauthorized reprinting or reproduction of the contents of this document in part or in whole is strictly prohibited, unless otherwise stipulated by law.
- The contents of this document are subject to change without notice to allow product improvements.
- The user must accept Software License Agreement before using this product (refer to '2-4-2 Accept license agreement'). Installation implies acceptance of the terms of the licence agreement.
- Use this software solely for the intended purpose. Modifying the software or using the software in a manner departing from this manual may affect product safety and quality. Riken Keiki rejects all liability for any incidents or damages arising from failure to observe the warnings indicated above.

Microsoft Windows 10, Microsoft Windows 11 is a registered trademark of Microsoft Corporation in the US and other countries.

1-3 DANGER, WARNING, and NOTE

This operating manual uses the following categories to indicate potential damage/hazards if the user disregards the information provided and uses the product incorrectly:

 **DANGER**	This indicates situations in which improper handling may result in fatal or serious injury or significant property damage.
 **WARNING**	This indicates situations in which improper handling may result in serious injury or significant property damage.
 **CAUTION**	This indicates situations in which improper handling may result in minor injury or minor property damage.

Additionally, usage recommendations are indicated as follows:

NOTE	This indicates items that will be helpful to know when using the product.

2

Installing and Uninstalling

2-1 Operating environment and precautions

This program is compatible with the Microsoft Windows 10, Microsoft Windows 11 operating system. The program is not compatible with other operating systems.
This program requires up to approximately 5 MB of free hard disk space to install. It may require additional space, depending on the number of data items. Make sure sufficient disk space is available.

2-2 PC settings

The program uses a virtual PC COM port with a USB to UART bridge controller by means of a dedicated IrDACOM adapter.
The USB to UART bridge controller used is the Silicon Laboratories CP2102N.

Serial port settings:
Baud rate: 921,600 bps, Data: 8 bits, Parity: Even, Stop bit: 1

Obtaining the driver:
Download the P210x USB Virtual COM Port (VCP) from the Silicon Laboratories website (see below) and install the driver.

Japanese site: https://jp.silabs.com/developers/usb-to-uart-bridge-vcp-drivers
English site: https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers

2-3 Installing the software

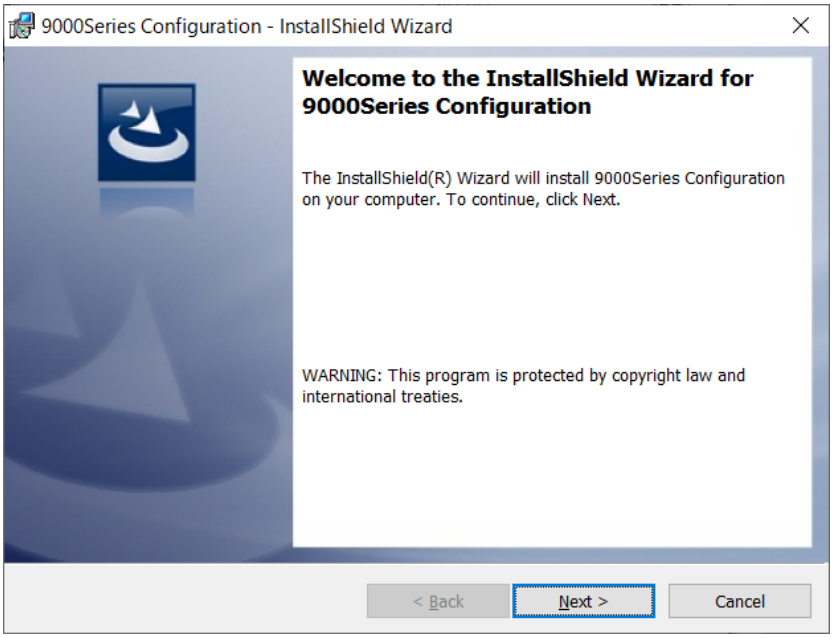
Install this programme on your personal computer. Proceed as follows.

1. Download the zip file (9000Series configuration Program (MT-9000Series (EX))) from the product information page on the RIKEN KEIKI CORPORATION website.
2. Double-click the "setup.exe" file in the zip file.

2-4 Installation procedure

2-4-1 Launch setup

The installation screen will appear after setup.exe is launched.
⇒Click the [Next] button. To abort the installation, click [Cancel].



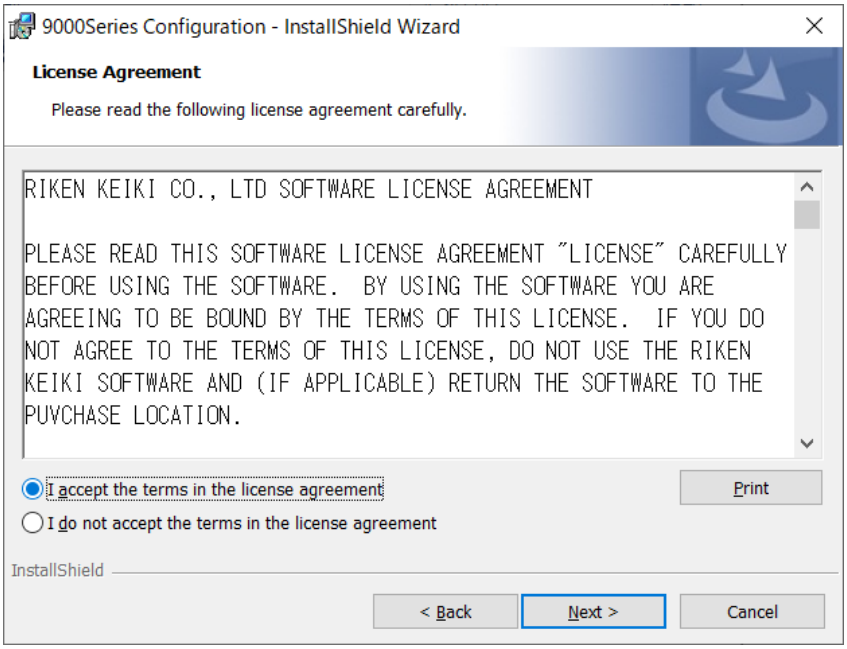
NOTE

- Make sure you have read and fully understand the terms of the software license agreement before installing the software.
- Precautions for installing
  This software requires libraries for various drivers for the Windows system. Installing the software automatically initiates the processing required to incorporate these libraries. However, if you are using Windows system, you will be asked to install system libraries with administrator privileges. Follow the instructions displayed to log in as an administrator and install the system libraries. You will then be asked to restart Windows. When Windows restarts, log in once again as a general user, then install the application.
  (To install the libraries and the application, simply launch setup.exe. Administrator privileges are required only if the necessary libraries are not present in the system folder.)

2-4-2 Accept license agreement

The license agreement screen is displayed.

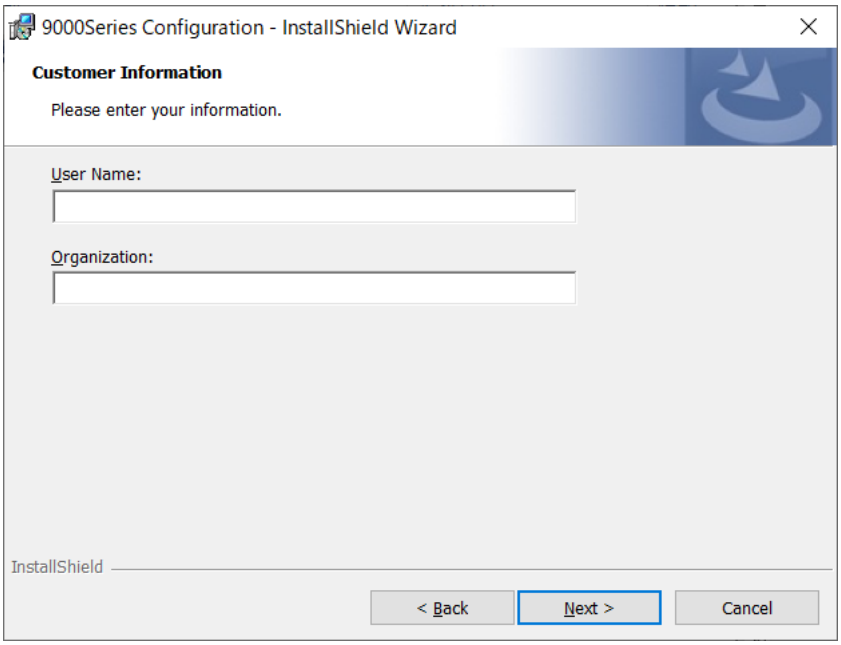
⇒Consent to the license agreement by selecting the corresponding radio button and click [Next] to install the software. To abort the installation, click [Cancel].
To go back and review the previous page, click [Back].



2-4-3 User information

A screen is displayed for entering user information.

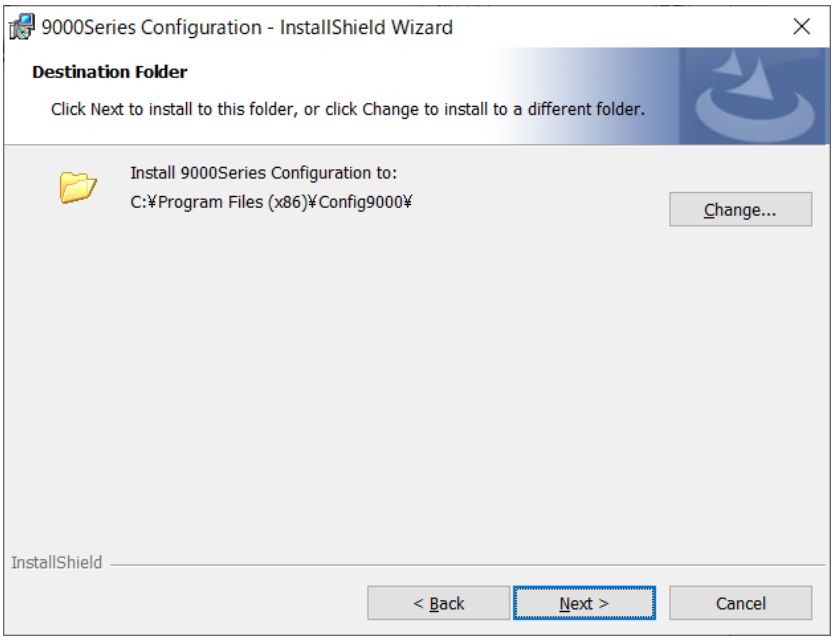
⇒Enter the required details and click [Next] to install the software. To abort the installation, click [Cancel].
To go back and review the previous page, click [Back].



2-4-4 Installation destination folder

The installation destination folder is displayed. (To change the folder, click [Change] and specify another folder.)

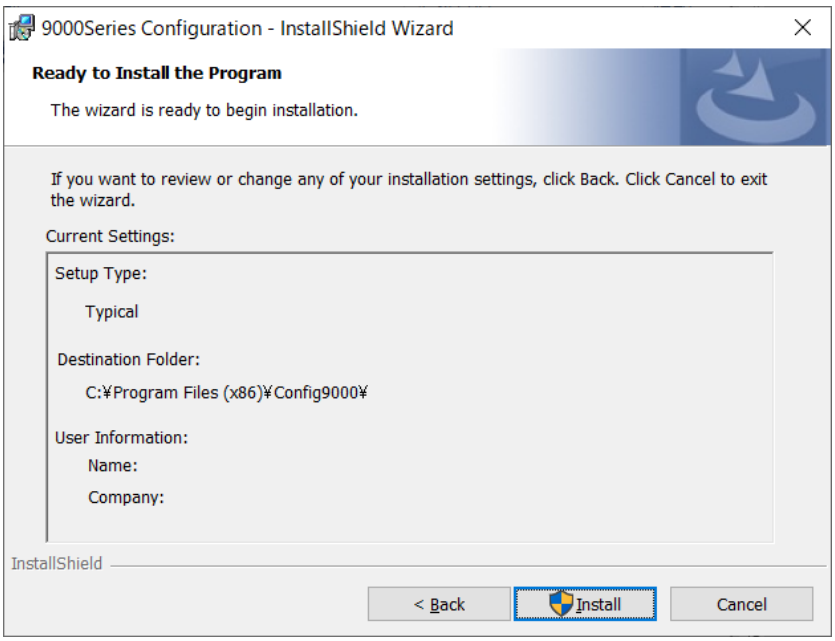
⇒To install the software, click [Next]. To abort the installation, click [Cancel].
To go back and review the previous page, click [Back].



2-4-5 Start setup

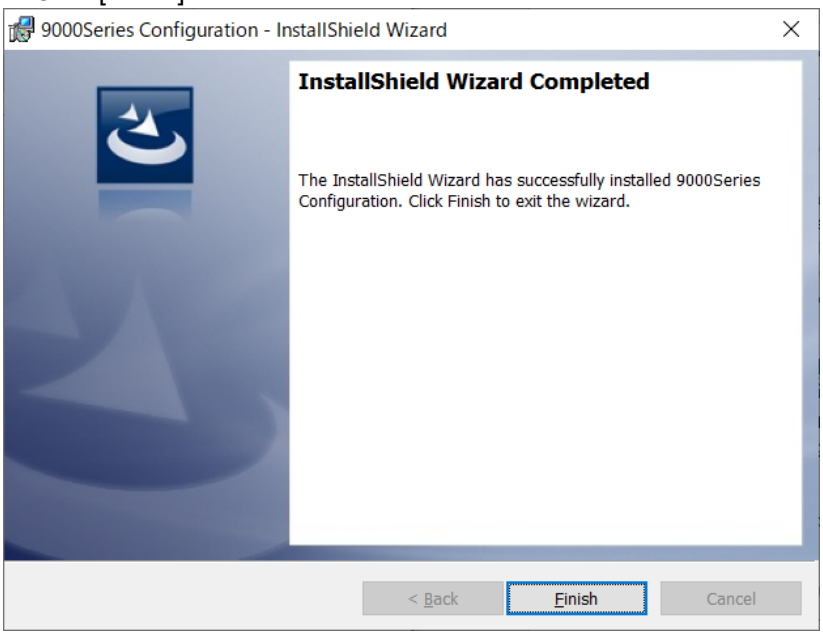
Final confirmation to install the software

⇒To install the software, click [Install]. To abort the installation, click [Cancel].
To go back and review the previous page, click [Back].



2-4-6 Finish

A screen appears indicating that the installation is complete.
⇒Click [Finish] to end the installation.

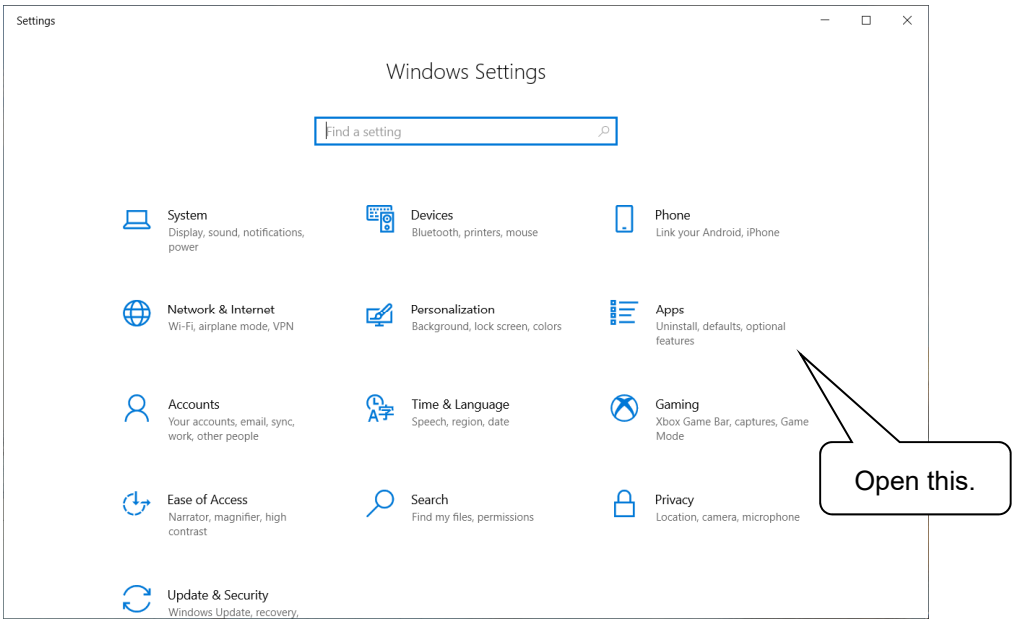


NOTE

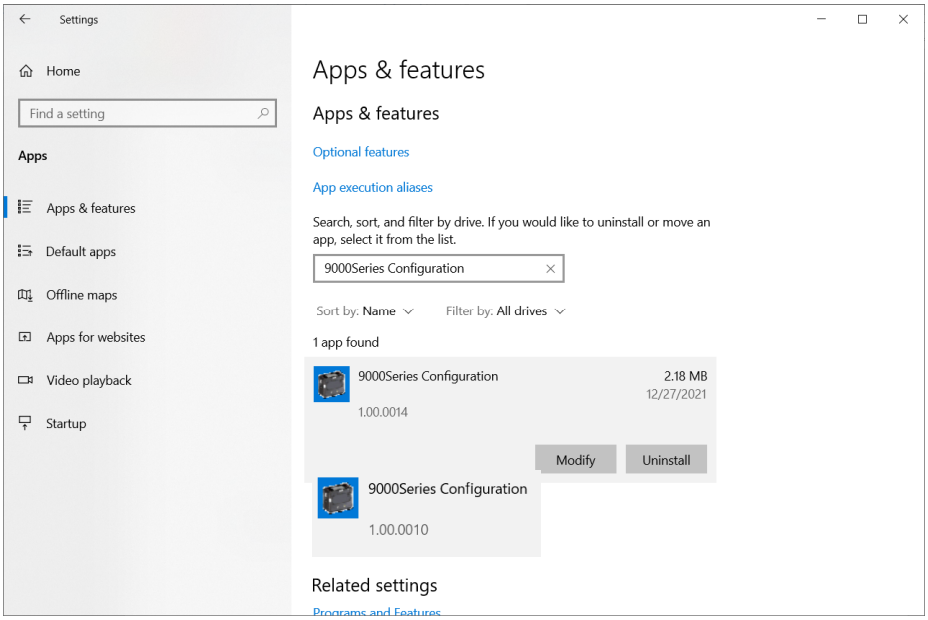
- Make sure you have read and fully understand the terms of the software license agreement before installing the software.
- Saving past data before reinstalling
  Note the following precautions if reinstalling the program: Uninstall the program before reinstalling. If the program is uninstalled after it has been used, some files may remain undeleted. If you wish to save past data, save these files to another location before deleting the folder.
- Precautions for installing
  This software requires libraries for various drivers for the Windows system. Installing the software automatically initiates the processing required to incorporate these libraries. However, if you are using Windows system, you will be asked to install system libraries with administrator privileges. Follow the instructions displayed to log in as an administrator and install the system libraries. You will then be asked to restart Windows. When Windows restarts, log in once again as a general user, then install the application.
  (To install the libraries and the application, simply launch setup.exe.
  Administrator privileges are required only if the necessary libraries are not present in the system folder.)

2-5 Uninstallation procedure

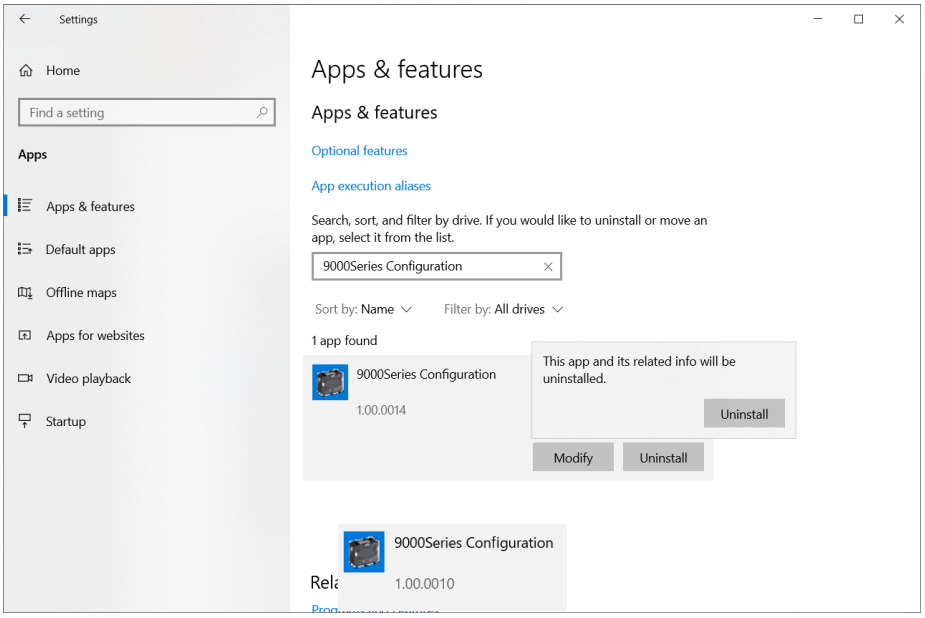
The exact procedure may vary depending on the particular Windows version used. Refer to the user manual for the environment being used (e.g., Windows 10).
To uninstall the software, click [Start] on the taskbar, click [Settings], and launch the Control Panel.



Click to open [Apps] in the Control Panel.
Clicking [Apps] opens the following window:



Click [9000Series Configuration].
Click [Uninstall] to display the confirmation window.



Click [Uninstall] again in the confirmation window to begin uninstalling.
* A User Account Control dialog is displayed. Click [Yes].

NOTE

- The message [Do you want to remove the shared file?] may appear during the uninstallation. Select [No]. Selecting [Yes] may affect other applications.

3

Operating Procedures

Launch the program by clicking the [9000Series Config] shortcut on the desktop or from the Start menu.

3-1 Main unit preparation

1. Connect the gas detector to the PC via a USB cable.
2. Enter the startup password (refer to '3-2 Entering the startup password') to launch the software.
3. Turn on the power to the gas detector main unit.

NOTE

- The USB cable must be properly connected and the driver properly installed to enable communication with the gas detector.

3-2 Entering the startup password

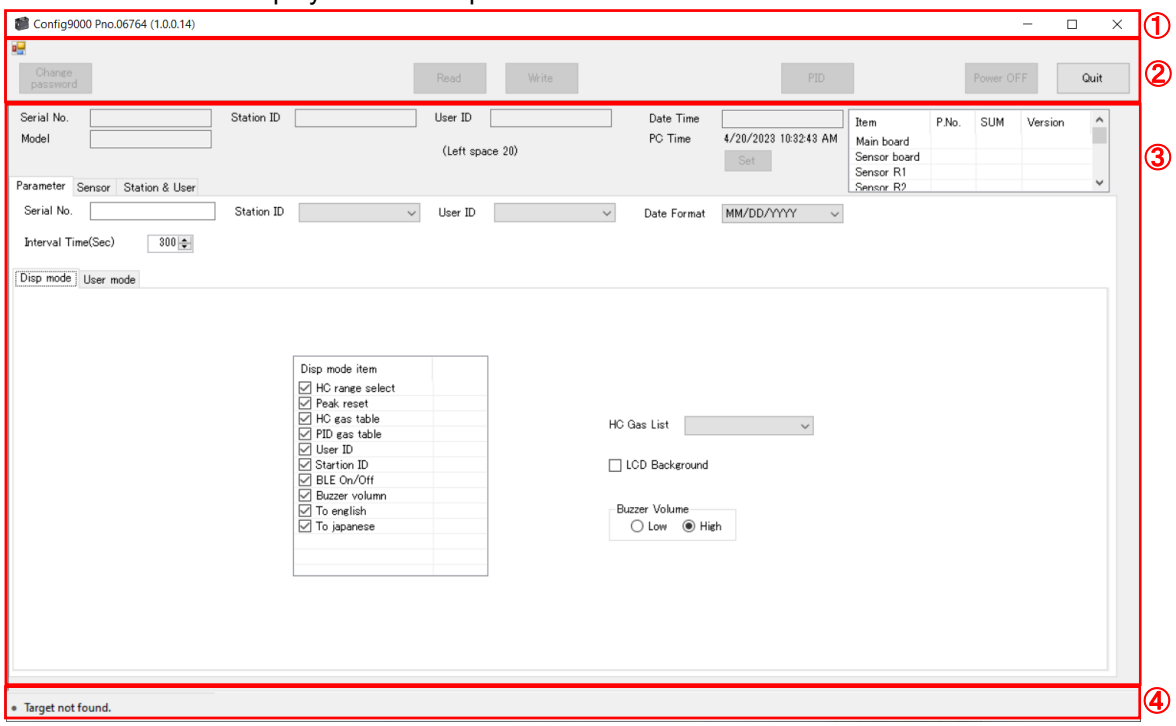
A password must be entered upon the startup of the program. The default setting is 0000.

[OK]: The software will start once the correct password is entered.

[Cancel]: Exits the software.

3-3 Main screen

The main screen is displayed once the password has been entered.



No.	Item	Description
①	Title bar	The title bar displays the application name, program number, and version.
②	Control panel	Used to set the password, import or export device information, and configure PID settings
③	Configuration settings	Used to configure various gas detector settings
④	Status	Displays an icon indicating the current connection status together with the connected device name. Not connected to a gas detector: [● No device detected] Connected to a gas detector: [● 9000Series]

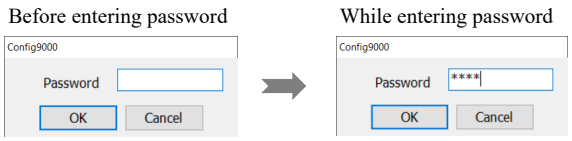
3-3-1 Control panel

Item	Description
Password change	Changes the password required to launch the software.
Read	Imports setting information from the gas detector.
Write	Exports setting information to the gas detector.
PID	Runs the PID gas list function used to change the PID gas list. (Refer to '3-3-3 PID gas list function'.)
Power off	Turns off the power to the gas detector.
Exit	Exits the software.

1. Password change

Changes the password required to launch the software.

【Display】
The [Password change] button is enabled when a detector is connected.
The [Password change] button is grayed out and disabled when no detector is connected.
【Operation】
Clicking the [Password change] button displays the new password input dialog.
You can input single-byte alphanumeric and symbol characters in the input box. Input characters are displayed as “*”.

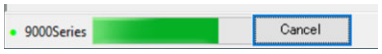


Enter the new password, then click the [OK] button to update the password and return to the configuration screen.
Clicking the [Cancel] button aborts the process and closes the dialog.

2. Read

Imports setting information from the detector.

【Display】
The [Read] button is enabled when a detector is connected.
The [Read] button is grayed out and disabled when no detector is connected.
【Operation】
Click the [Read] button to start importing status information from the detector.
The status bar indicates the progress while the detector status is being imported.
The [Cancel] button is displayed on the status bar while the detector status is being imported.



Clicking the [Cancel] button while the detector status is being imported aborts the status import process.
The progress indicator and [Cancel] button on the status bar will disappear once the detector status import is complete.

NOTE

- Depending on the usage environment and USB cable compatibility, communication may be disconnected unexpectedly after settings have been imported. If this occurs, re-import the settings before editing them.

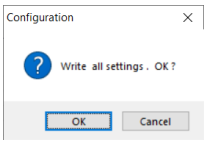
3. Write

Exports setting information to the gas detector. Configuration settings (‘3-3-2 Configuration settings’) and PID settings (‘3-3-3 PID gas list function’) that have been changed will not be reflected on the gas detector until this operation is performed.

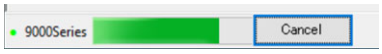
【Display】
The [Write] button is enabled when a detector is connected.
The [Write] button is grayed out and disabled when no detector is connected or if setting information has not been imported as described in ‘2. Read’.

【Operation】

Click the [Write] button to display the write confirmation dialog.



Click the [OK] button in the write confirmation dialog to start exporting data to the detector.
Clicking the [Cancel] button in the write confirmation dialog cancels the export process and closes the dialog.
The status bar indicates the progress while data is being exported.
The [Cancel] button is displayed on the status bar while data is being exported.



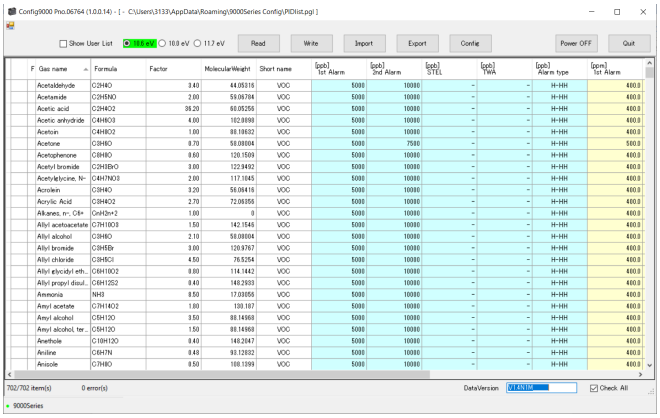
Clicking the [Cancel] button while data is being exported aborts the export process.
The progress indicator and [Cancel] button on the status bar will disappear once the export is complete, and the exit dialog will appear.

NOTE

- After exporting data, click [Read] to confirm the settings have been updated correctly.
- If the connection is lost even for an instant, the [Write] button will be grayed out and the operation will be disabled.
  If this occurs, repeat the operation from [Read].

4. PID

Activates the PID gas list function used to change the PID gas list (refer to '3-3-3 PID gas list function').



5. Power off

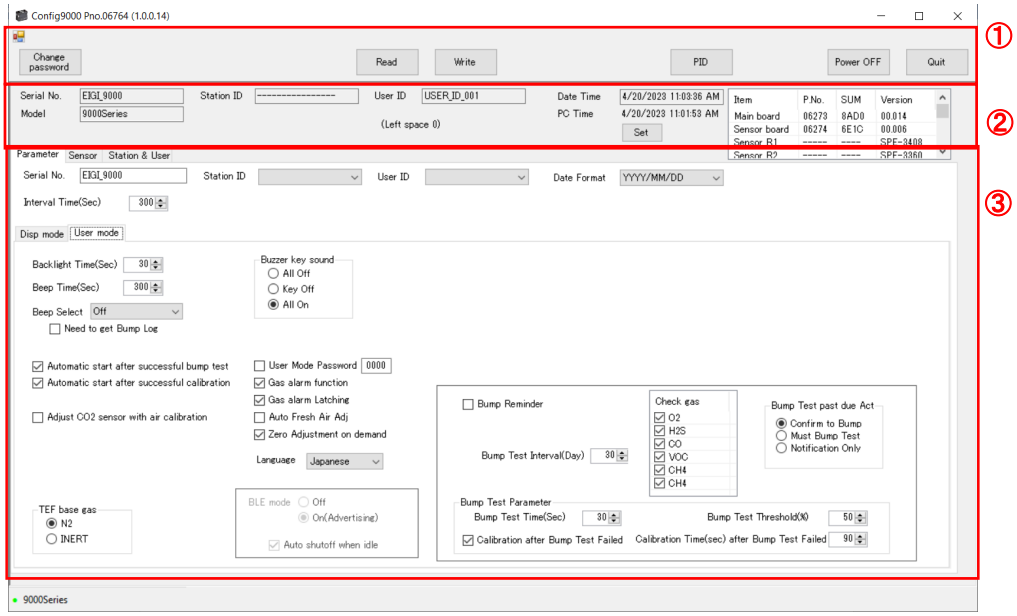
Turns off the power to the gas detector.

6. Exit

Exits the software.

3-3-2 Configuration settings

This is used to configure various gas detector settings.



No.	Item	Description
①	Device status	Displays the detector information.
②	Tab 1	Parameter: Sets various gas detector settings. Sensor: Sets various sensor settings. Station & user: Sets the station ID and user ID.
③	Tab 2	Display mode: Sets various settings in display mode. User mode: Sets various settings in user mode.

NOTE

- Be sure to connect the gas detector and import data before using the configuration function to change settings.

1. Device status

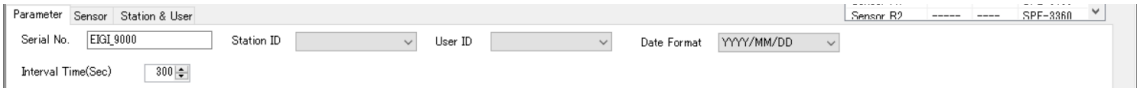
Item	Description
Serial No.	Displays the serial number of the imported detector.
Model	Displays the model of the imported detector.
Station ID	Displays the station ID of the imported detector.
User ID	Displays the user ID of the imported detector.
Date and time	Displays the date and time of the imported detector.
Synchronize	Synchronizes the date and time of the detector with the PC date and time.
Parts information (Main PCB, sensor PCB, etc.)	Displays the program number (five digits), SUM value (four digits), and version (two + three digits). (Parts not in use are indicated by [-] in each column.)

NOTE

- The display is blank until the detector data is imported.

2. Tab 1 (Parameter)

Sets various gas detector settings.



Item	Description
Serial No.	Input the detector serial number.
Station ID	Select the detector station ID.
User ID	Select the detector user ID.
Date format	Select the detector date format.
Interval trend measurement cycle (s)	Select the detector interval trend measurement cycle.

<Serial No.>

【Display】

Displays the detector serial number. (The display is blank until the detector data is imported.)

【Operation】

You can input up to 20 single-byte alphanumeric and symbol characters for the serial number.
If the serial number entered is less than 20 characters long, the remaining characters will be filled with half-width spaces.

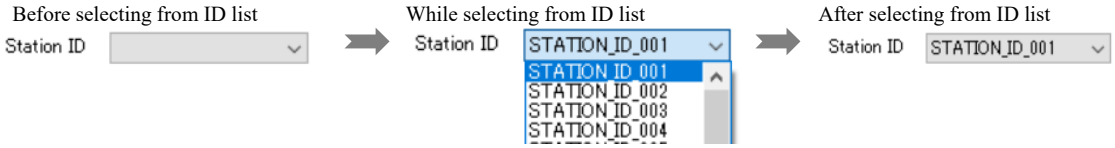
<Station ID>

【Display】

Displays the station ID list imported from the detector or from a CSV file. (The display is unselected until the detector data is imported.)

【Operation】

Click the drop-down list box after importing ID data to display the list of imported IDs.



Select the desired station ID from the drop-down list.
Clicking outside the drop-down list while the ID list is displayed cancels the process.

NOTE

- The display is unselected until the station ID list is imported even after the detector data has been imported.
- No selection items are displayed until the station ID list is imported, even if you click the drop-down list box.
- For details of how to import the ID list, refer to ‘4. Tab 1 (Station & user)’.

<User ID>

【Display】

Displays the user ID list imported from the detector or from a CSV file. (The display is unselected until the detector data is imported).

【Operation】

Click the drop-down list box after importing ID data to display the list of imported IDs.

Select the desired user ID from the drop-down list.

Clicking outside the drop-down list while the ID list is displayed cancels the process.

NOTE

- The display is unselected until the user ID list is imported even after the detector data has been imported.
- No selection items are displayed until the user ID list is imported, even if you click the drop-down list box.
- For details of how to import the ID list, refer to '4. Tab 1 (Station & user)'.

<Date format>

【Display】

Displays the date format for the detector. (The display until the detector data is imported is YYYY/MM/DD for Japanese operating systems and MM/DD/YYYY for all other language operating systems.)

【Operation】

Clicking the date format displays the drop-down list. Three settings are available: DD/MM/YYYY, MM/DD/YYYY, and YYYY/MM/DD

Select and click a date format from the drop-down list to change the date format.

Clicking outside the drop-down list while the date format list is displayed cancels the change.

<Interval trend measurement cycle (s)>

【Display】

Displays the detector interval trend cycle. (The display is [300] until the detector data is imported).

【Operation】

Changing the setting changes the interval trend cycle.

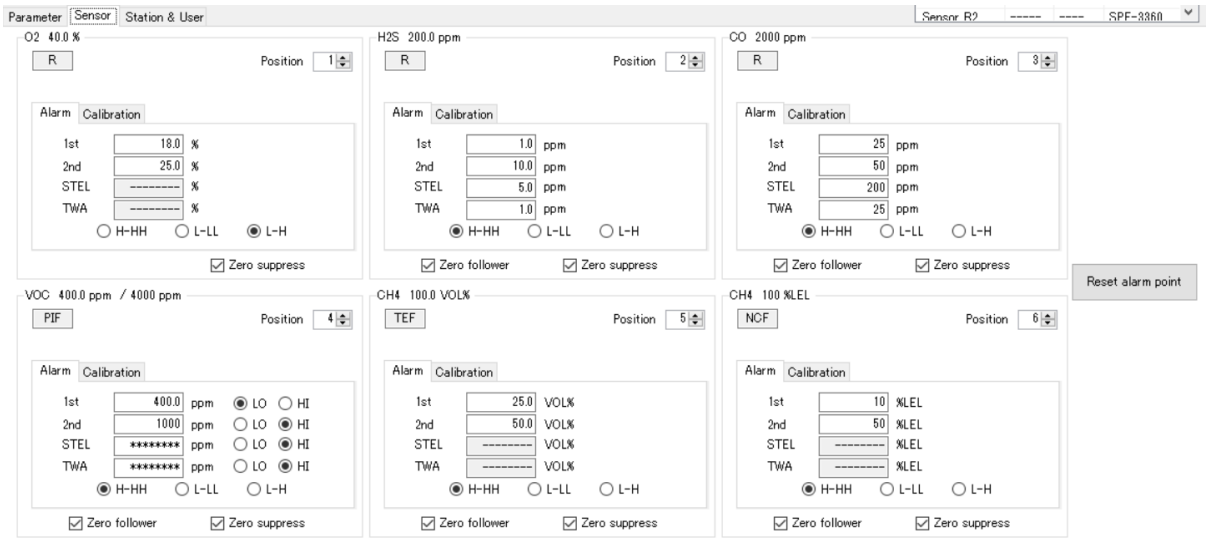
Seven settings are available: 10, 20, 30, 60, 180, 300, and 600

The setting can be altered with the spin buttons or by inputting the value directly.

Entering an invalid value for allowable cycles will change the entry to the nearest setting value.

3. Tab 1 (Sensor)

Sets various sensor settings.



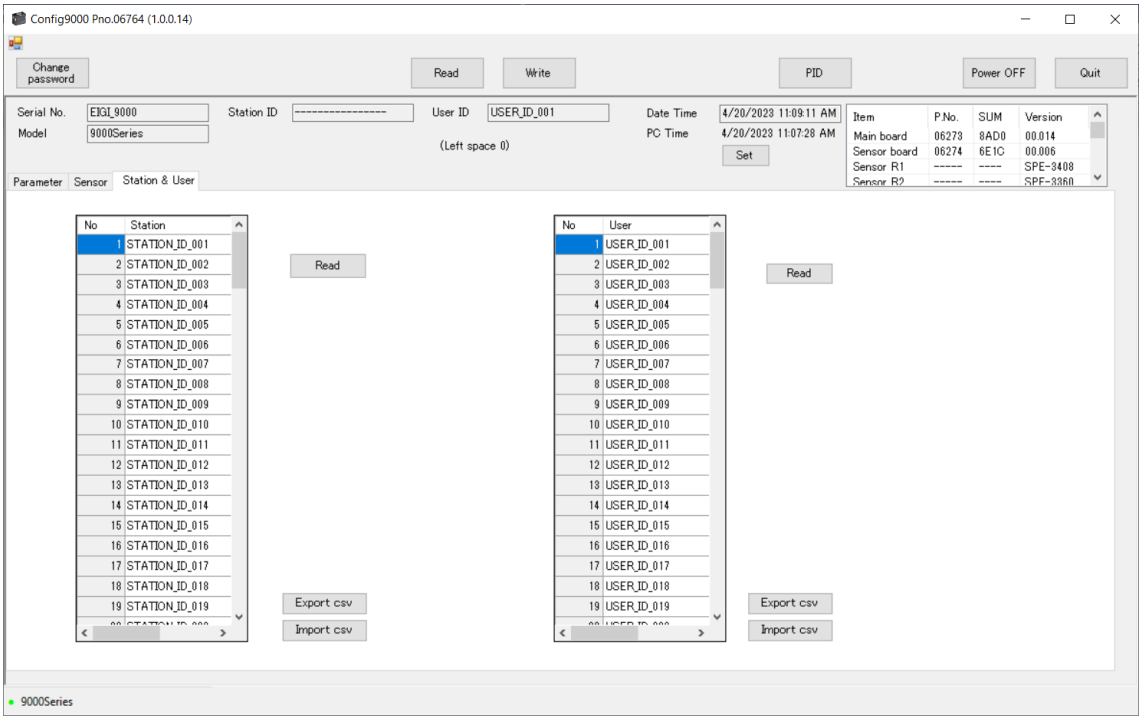
Item	Description
Display position	Select the sensor display position from 1 to 6. The position to set must differ from those set for other sensors.
Gas alarm concentrations	Enter concentrations for the 1st, 2nd, STEL, and TWA gas alarms. If no alarm setpoint exists, [--------] is displayed. Alarm setpoints cannot be enabled for such sensors. Only the STEL and TWA alarm setpoints can be disabled. Setpoints that have been disabled will appear as [********]. Enter a value to enable an alarm setpoint. * For more information on allowable gas alarm setpoint setting ranges, refer to the operating manual for the gas detector. * To change gas alarm setpoints, delete the current values before entering the new values.
Gas alarm range	Select whether alarm setpoints are set for either low range or high range with double ranges. (Settings are possible only for double ranges.)
Gas alarm type	Select the gas alarm type H-HH, L-LL, or L-H. * For H-HH/L-H: Set alarm setpoints so that 1st ≤ 2nd. * For L-LL: Set alarm setpoints so that 2nd ≤ 1st.
Zero following	This lets you enable and disable zero following.
Zero suppression	This lets you enable and disable zero suppression.
Gas adjustment cylinder setting	Select a gas adjustment cylinder setting from 1 to 6.
Gas alarm setpoint reset	Resets the gas alarm setpoints to the factory default values.

NOTE

- The display is blank until the detector data is imported.
- Gas alarm setpoint reset is disabled if the specifications for the sensor mounted differ from the factory default settings. [Failed] will be displayed if you attempt alarm setpoint resetting.

4. Tab 1 (Station & user)

Sets the station ID and user ID.



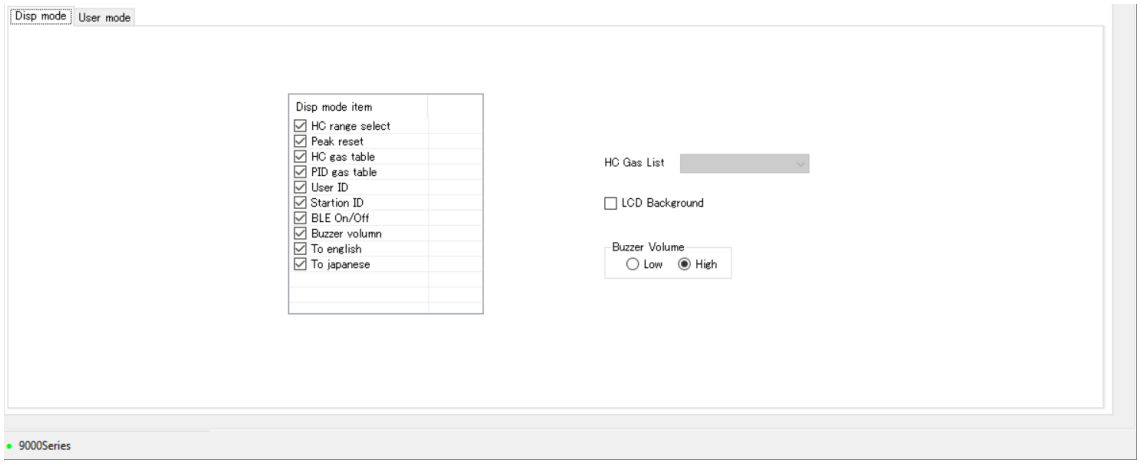
Item	Description
Read	Imports list data from the detector.
Export	Saves the displayed list data in CSV format.
Import	Imports list data in CSV format to alter it.

NOTE

- The [Read] button appears and the [Import csv file] button is enabled after detector data is imported. The ID list appears and the [Export csv file] button is enabled after the ID list data is imported. (The ID lists and [Read] buttons do not appear and the [Export csv file] and [Import csv file] buttons are disabled until the detector data is imported.)

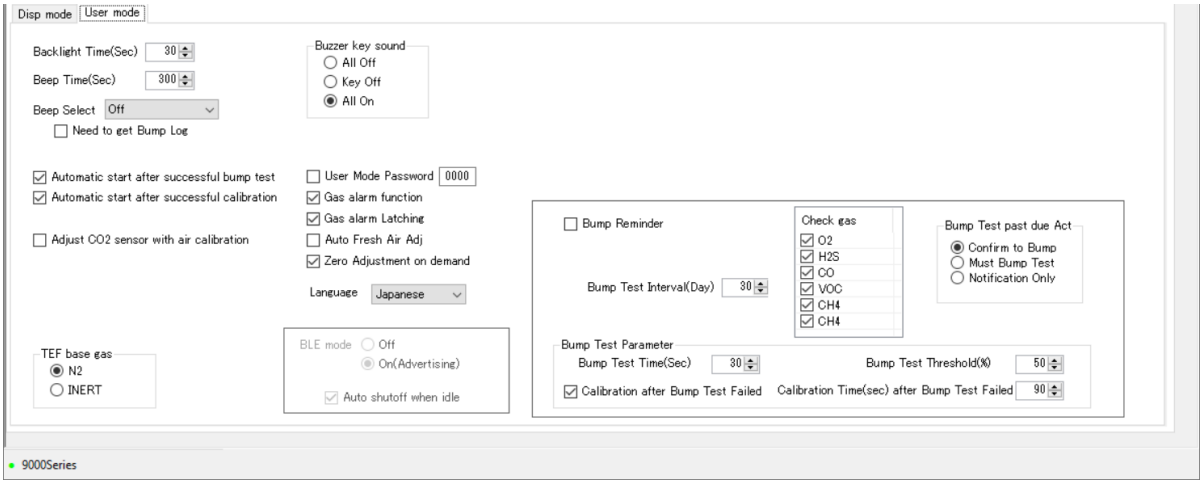
5. Tab 2 (Display mode)

Sets various settings in display mode.



Item	Description
DISP mode setting items	Toggles the various display mode settings on and off.
Conversion gas selection	This can be altered if an NCF sensor is mounted and no TEF sensor is mounted. * NCF: New ceramic type sensor used for combustible gas %LEL detection * TEF: Thermal conductivity type sensor used for combustible gas vol% detection
LCD background	Toggles the LCD background inversion on and off.
Buzzer volume	Switches the buzzer volume between high and low.

6. Tab 2 (User mode)



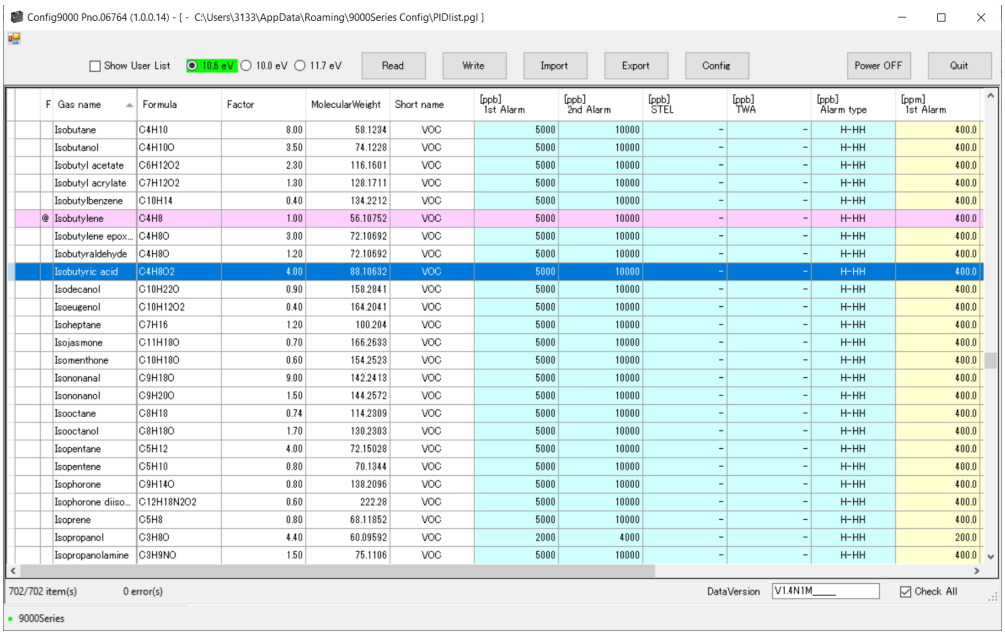
For an explanation of the operation of each item, please refer to the instruction manual of the gas detector itself.

Item	Description
Display backlight	Select from 0 to 255 seconds.
Beep interval	Operating interval for the confirmation beep (period for which the backlight is turned on when a key is pressed) Select from 5, 10, 20, 30, 40, 50, 60, 180, 300, 600, 1200, 1800, 2400, 3000, and 3600 seconds.
Beep operation	The following selections are available: [Off], [LED], [Buzzer], [LED+Buzzer], [Bump/Cal], [Alarm alert], [Bump/Cal/Alarm] * For information on individual operations, refer to '5-7-4 Confirmation beep operation' in the detector operating manual.
Bump log required	This item is used with the beep operation. Can be toggled on and off. Adds the requirement to download the history using the data logger software when resetting the Bump/Cal, Alarm alert, or Bump/Cal/Alarm operation.
Auto start when bump is successful	Can be toggled on and off. * Refer to '8-3 Performing bump tests' in the detector operating manual.
Auto start when adjustment is successful	Can be toggled on and off. * Refer to '8-2-5 Performing span adjustment' in the detector operating manual.
CO2 sensor fresh air adjustment	Can be toggled on and off. * Refer to '7-4-2 Enabling/disabling CO2 fresh air adjustment' in the detector operating manual.
TEF base gas	Can be switched to N2 or INERT. * Refer to '7-4-3 Selecting base gas adjustment gas type' in the detector operating manual.
Buzzer/Key operation tone	Can be switched to [All off], [Key off], or [All on]. * Refer to '6-4-7 Setting the buzzer volume' in the detector operating manual.
User password	Toggles the user mode password on and off; allows the password to be changed. * Refer to '7-2 Switching to user mode' in the detector operating manual.
Gas alarm function	Can be toggled on and off. * Refer to '7-3-5 Enabling/disabling the alarm function' in the detector operating manual.
Gas alarm self-latching	Can be toggled on and off. * Refer to '7-3-3 Setting alarm pattern' in the detector operating manual.
Auto zero adjustment	Can be toggled on and off. When enabled, a dialog appears to confirm whether to perform fresh air adjustment before starting measurement after the gas detector startup operation is complete.

Demand zero adjustment	Can be toggled on and off. * Refer to '5-6-2 Performing fresh air adjustment' in the detector operating manual.
Language	The following selections are available: English, Japanese, Italian, Spanish, German, French, Portuguese, Russian, Korean, Chinese (SC), Chinese (TC), Vietnamese, Polish, Turkish, Slovak, Czech * Refer to '7-4-5 Setting the display language' in the detector operating manual.
BLE mode	Can be switched to [Off] and [On (Advertising)]. * Refer to '6-4-6 Setting Bluetooth device connection' in the detector operating manual.
Auto stop with no connection	Can be toggled on and off. When enabled, the Bluetooth function is automatically turned off if no communication occurs for 5 minutes while the function is turned on. * Refer to '6-4-6 Setting Bluetooth device connection' in the detector operating manual.
Adjustment expiration display	Can be toggled on and off. * Refer to '5-4 Turning on the power - Adjustment expiration date display' in the detector operating manual. * Displayed on export models detectors only
Adjustment interval	Select from 0 to 1,000 days. This is the number of days used to calculate the bump test expiration date. * Displayed on export models detectors only.
Adjustment target gas selection	Select the gas types to monitor with the adjustment expiration display function. If the setting is disabled, the set gas types will not be used to determine bump test expiration. * Displayed on export models detectors only.
Operation after adjustment expiration	The following selections are available: [Use after checking], [Use prohibited], [Do nothing] * Refer to '5-4 Turning on the power - Adjustment expiration date display' in the detector operating manual. * Displayed on export models detectors only.
BUMP REMINDER	Can be toggled on and off. * Refer to '5-4 Turning on the power - BUMP REMINDER' in the detector operating manual.
Bump test interval	Select from 0 to 30 days. This is the number of days used to calculate the bump test expiration date.
Bump test target gas selection	Select the gas types to monitor with the bump test expiration function. If the setting is disabled, the set gas types will not be used to determine bump test expiration.
Operation after bump test expiration	The following selections are available: [Use after checking], [Use prohibited], [Do nothing] * Refer to '5-4 Turning on the power - BUMP REMINDER' in the detector operating manual.
Bump test time	The time until testing starts after bump test starts. Select from 30, 40, 50, 60, 70, 80, and 90 seconds. * Refer to '8-3 Performing bump tests' in the detector operating manual.
Calibration after bump test failure	Can be toggled on and off. Sets whether to perform calibration automatically if a bump test fails. * Refer to '8-3 Performing bump tests' in the detector operating manual.
Tolerance	This sets the threshold for checking the test gas. Select from 10, 20, 30, 40, and 50 %. * Refer to '8-3 Performing bump tests' in the detector operating manual.
Calibration time	The time until adjustment starts after bump test starts. Select 90 or 120 seconds. * Refer to '8-3 Performing bump tests' in the detector operating manual.

3-3-3 PID gas list function

Click [PID] on the control panel to activate the PID gas list function.
Use this function to alter the PID gas list.
Operation is possible even without a PID sensor, but writing is not reflected in the operation.



Item	Description
Import	Imports PID gas table data from a separate file and updates the gas table data displayed.
Export	Outputs the displayed gas table data as a file.
Config	Activates the configuration function to alter the gas detector settings (returns to the main screen).
User list display	Displays the user list to edit. The user list makes it easier to select frequently selected gases.
PID sensor type selection	Select a PID sensor type for viewing and editing from 10.6 eV, 10.0 eV, and 11.7 eV. The LED mounted must be checked and specified.
Table item names	Items including gas names and chemical formulas. Click to resort by item contents.
Gas highlighted in pink	The gas displayed initially when a PID sensor is first mounted The gas displayed initially can be changed by right-clicking and selecting [Set to default].
Gas highlighted in blue	The gas currently selected. Double-click or right-click to select [Edit], [Delete], [Set to default], [Select for F1], [Select for F2], or [Select for F3].
F column	[@] is displayed in this column for gases for which conversion is performed using a PID sensor. Select gases by right-clicking and selecting [Select for F1], [Select for F2], or [Select for F3]. * F1, F2, and F3 indicate the sensor slots described in the detector operating manual, and allow gas conversion using PID sensors mounted in the corresponding slots.
Number of items	Displays the number of the gases currently displayed.
Data version	Displays the PID list version.

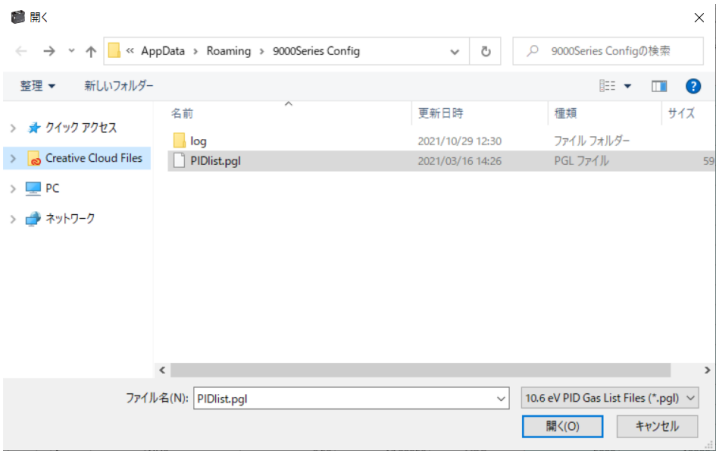
Select all	Selects all gases in the list. Click with all gases selected to deselect all except the following gases: ・ Default setting gas (gas highlighted in pink) ・ F selection gases (PID sensor conversion gases selected in the F column) ・ Isobutylene (calibration gas) ・ Gases set in the user list

NOTE

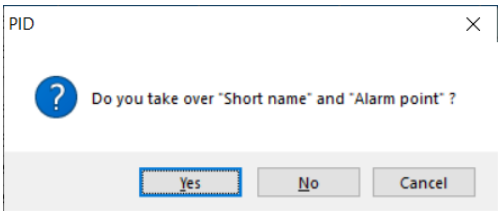
▶ The list displayed before importing contains the values saved to the PC. For this reason data to be edited inside the detector must be imported before entering new settings.

1. Import

Imports gas table data from a separate file and updates the gas table data displayed.
Select the file, then click [Open].



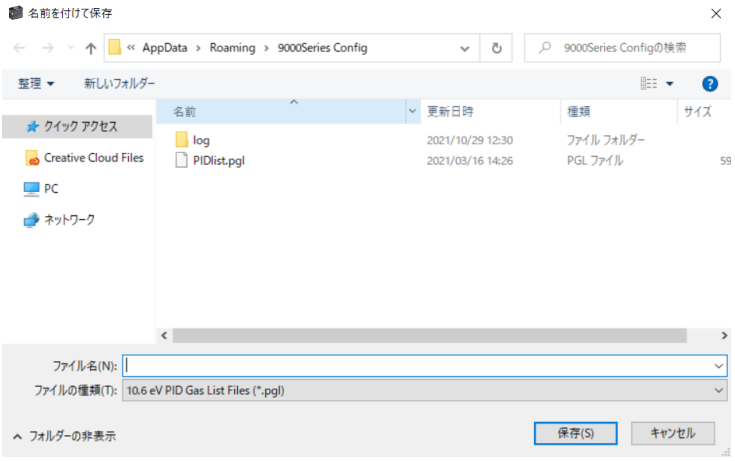
The following confirmation dialog is displayed when updating data:



Clicking [Yes] updates the gas table data including abbreviated names and alarm setpoints.
Clicking [No] updates the gas table data not including abbreviated names and alarm setpoints.
Clicking [Cancel] cancels updating the gas table data.

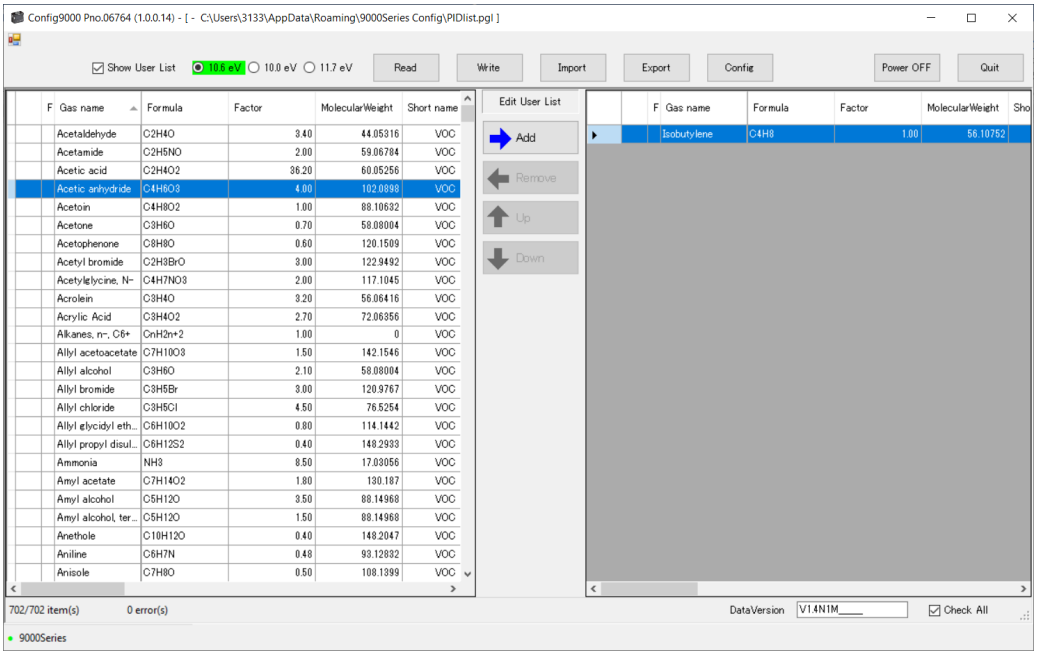
2. Export

Outputs the displayed gas table data as a file.



3. User list display

The user list makes it easier to select frequently selected gases. Up to 30 gas types can be set. It is displayed when the user list display is checked.



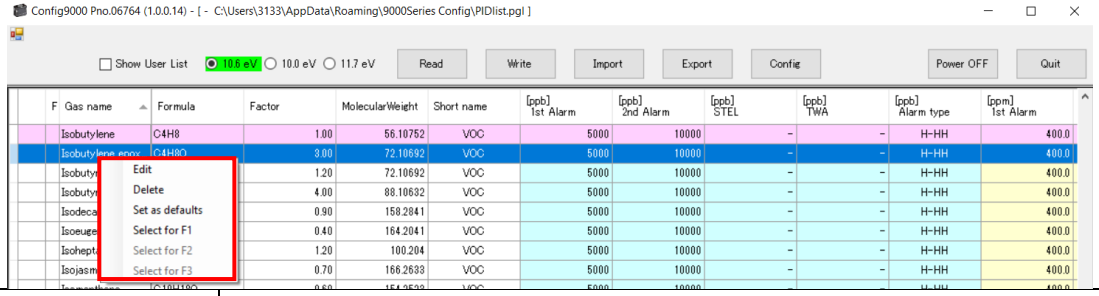
Item	Description
[→ Add]	Select a gas in the gas table data and click [→Add] to add that gas to the user list.
[← Delete]	Select a gas in the user list and click [←Delete] to delete that gas from the user list.
[↑ Up] [↓ Down]	Select a gas in the user list and click [↑Up] or [↓Down] to move the gas up or down in the user list.

NOTE

- The calibration gas isobutylene is automatically included in the user list and cannot be deleted.

4. Gas highlighted in blue

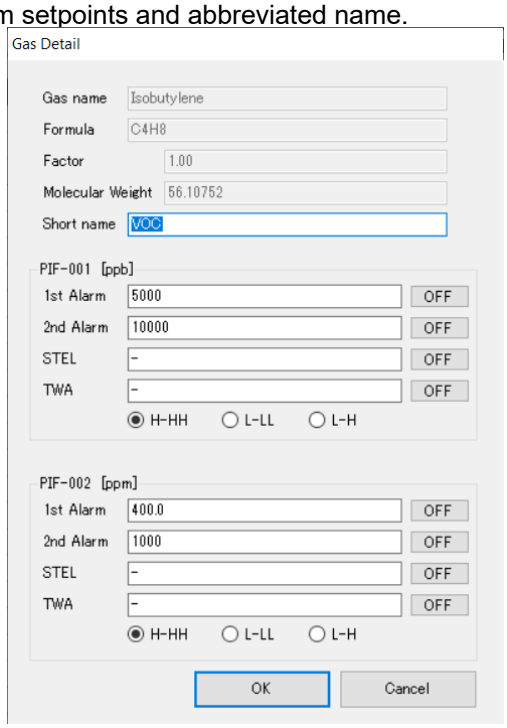
Double-click/right-click the gas highlighted in blue to perform various operations on that gas.



Edit	You can edit the gas alarm setpoints and abbreviated name.
Delete	You can delete the gas (except the isobutylene calibration gas) from the gas table data.
Set to default	You can change the gas initially displayed when using the detector (change the gas highlighted in pink).
Select for F1/Select for F2/Select for F3	Select the gases for which conversion is performed using a PID sensor. F1, F2, and F3 indicate the sensor slots described in the detector operating manual, and [@] is indicated in the F column when selected.

Click [Edit] to display the gas details and edit the gas alarm setpoints and abbreviated name.

Gas name (cannot be edited)	Displays the gas name.
Chemical formula (cannot be edited)	Displays the chemical formula.
Coefficient (cannot be edited)	Displays the calculation coefficient for the gas with respect to the isobutylene calibration gas.
Molecular weight (cannot be edited)	Displays the molecular weight.
Abbreviated name	Displays the abbreviated name. You can input up to three single-byte alphanumeric characters.
1st alarm 2nd alarm STEL TWA	Displays the alarm concentration. The setting range will be as follows depending on the full scale for each sensor model: Sensor model / Setting range PIF-001 / 0 - 40,000 ppb PIF-002 / 0 - 4,000 ppm PIF-003 / 0 - 100 ppm PIF-004 / 0 - 1,000 ppm Click [OFF] for the STEL and TWA alarms to display [-] and turn off the corresponding alarm.
H-HH, L-LL, L-H * This sensor should normally be used with H-HH.	Select the gas alarm type H-HH, L-LL, or L-H. For the initial H-HH setting, the alarm setpoints are set so that 1st ≤ 2nd.



4

Usage Precautions

Note the following precautions when using this program:

① Connect the USB cable correctly for receiving data.
② Avoid using similar functions on other applications at the same time when data is being received.
③ Do not force-quit this program (e.g., using the Ctrl + Alt + Del operation).
The program shutdown processing saves configuration parameters for the next time the program starts. Force-quitting the program may cause problems the next time the program starts.
④ Do not directly rewrite data files.

5

Troubleshooting

This troubleshooting section does not address causes of all problems that may occur with the product. It provides brief explanations to assist in determining the causes of common problems.
If you encounter symptoms not addressed here or if problems persist even after taking corrective action, contact Riken Keiki.

Symptom/Display	Cause	Action
Communication is not possible.	The USB cable is not correctly connected.	Confirm that it is correctly connected.
	The COM port is not recognized.*1	Install the correct driver.
	The driver is out of date.	Install the latest driver version.
The detector connected via USB is not recognized.	The USB connection is not recognized.	Disconnect and reconnect the USB cable or restart the PC.
	The detector is not in communication mode.	Connect the gas detector to the PC, then turn on the power to the detector once again with this software running.
Displayed when multiple USB serial converters are connected	Multiple CP210x products are connected.	Disconnect the USB connections except for the USB connection to the 9000 Series unit to be set.

*1 Launch Device Manager and check to confirm that [Silicon Labs CP210x USB to UART Bridge (COM number)] is displayed for the ports (COM and LPT). If the problems persist even after taking the action described above, please contact Riken Keiki.

6

Software Function Specifications

Product name (Program name)	9000 Series Configuration Program
Product model	MT-9000 Series (EX)
Executable file name	Config9000.exe
Compatible operating systems	Microsoft Corporation Windows 10 Windows 11
Program size	Approx. 2 MB (Uses up to 5 MB of hard disk space during installation.)
Communication with main unit	Serial interface (USB to UART) Baud rate: 921,600 bps Data bits: 8 bits Stop bit: 1 bit Parity: Even
Transmission time	Setting function approx. 30 seconds PID function approx. 6 minutes

Revision History

Issue	Revision details	Issue date
0	First issue	2023/7/26
1	Error correction	2023/9/27