GDS ENGINEERING

2026 / USER MANUAL

GMS-1000

Gas Monitoring System User Manual

Installation and operation / Channel setting and calibration / Inspection and maintenance



Rev.1.0 | 2026.11.03

Applicable software GMS v1.2.60

Before use, verify the delivered model, input configuration, gas type, and measurement range.

gdseng.co.kr 031-731-0218

How to use this document

This document is for personnel responsible for operating and configuring the GMS-1000 gas monitoring system. It provides instructions on verifying sensor signals, responding to alarms, setting channels under approved conditions, and calibrating received current.

Differentiation	Applicable content
Target Product	GMS-1000 Gas Monitoring Receiver
Software	Based on GMS v1.2.60
Document Information	GDS-GMS-UM-001 / Rev.1.0 / 2026.11.03
Intended Users	Operators, Managers, Trained Installation/Inspection Personnel
Differences in Configuration	Number of Input Channels, UPS, External Alarm Output, and Remote Monitoring - Please verify the delivered configuration.

Find Information by Task

Tasks	Initial Review
Normal Operation	Reading the Screen and Indicators - Pages 9-10 / Alarm Response - Page 11
Configuration Changes	Device Configuration - Page 12 / Channels and Alarms - Pages 13-16
Input Calibration	Before calibration: p. 17 / ZERO, FULL and fine adjustment: pp. 18-19
Inspection and Support	Logs - Pages 22-23 / Troubleshooting - Page 26 / Inspection Records - Pages 28-29

> The photograph shows a supplied enclosure example. Screens were captured from the actual v1.2.60 program in a separate environment with illustrative inputs. Layout varies with channel count, resolution and installed options.

Table of Contents

Safety Instructions Before Use 04
Product Overview and Application Specifications 05
Appearance and Component Names 06
Installation and Signal Connection 07
Initial Power-On and Monitoring Start 08
Reading the Monitoring Screen 09
Indicators and connection status 10
When an Alarm Occurs 11
Device Settings Menu 12
Setting the Number of Channels and Connection Order 13
Confirmation of Initial Connection and Connection History 14
Setting Gas Type and Alarm Value 15
Setting and Alarm for the Oxygen Channel 16
Preparation and Verification Before Calibration 17
ZERO and FULL Calibration 18
Fine Adjustment of Current 19
Connection of PoE and Communication Detector 20
Wireless Network Connection 21
Retrieving Detector Records 22
Saving Graphs and CSV 23
Program Update 24
Diagnostics and Maintenance Menu 25
Display of Faults and Actions 26
Connection to Control Computer 27
Trial Run and Regular Inspection Checklist 28
Setting Records and Technical Support 29

> Clicking on the PDF Table of Contents item will navigate to the corresponding page. Before installation or repair, please verify the nameplate and delivery wiring diagram.

Safety Instructions Before Use

01 Prioritize on-site emergency procedures

If a gas alarm or abnormal oxygen condition occurs, protect personnel and notify the safety officer under site emergency procedures. Never clear alarms or alter calibration to conceal a real hazard.

02 Wiring and opening by authorized personnel only

Installation, wiring, disassembly and repairs must be performed by trained personnel. Disconnect main and auxiliary power and verify absence of voltage before work. Do not confuse AC power terminals with detector signal terminals.

03 Calibration and output testing must be agreed upon in advance.

Coordinate calibration, alarm and firmware tests with responsible personnel. Manage interlocked equipment and alternative monitoring under site procedures. Monitoring and alarms may continue while a settings window is open.

04 Ensure backup monitoring if power and communication are lost.

Monitoring gaps may occur during program termination, restart, power failure, and network changes. After maintenance, verify that the concentration, alarm sound, external output, and communication are all restored to normal.

Follow the actual nameplate and supplied specifications for the receiver's environment, protection rating and power rating. Do not install the receiver in a hazardous area merely because an explosion-proof detector is connected.

Do not judge the last concentration as the current concentration when communication is interrupted or the channel is in a faulty state. Verify the normal receiving status and measurement time together.

Product Overview and Application Specifications

The GMS-1000 is a gas monitoring receiver that receives the 4-20mA current signal from the detector and the data from the supported communication detector, and displays the concentration, alarm, and fault status on a single screen.

Item	Product and software application conditions
Power	AC 220V / Prioritize actual nameplate and delivery wiring diagram
Detector connection	4-20mA current input / Supported PoE, Modbus TCP detectors
4-20mA channel	Up to 12 in the screen settings / Follow the actual input module configuration
Communication detector	Register and monitor the configured equipment / Verify the communication network and supported models
Screen display	Display up to 12 items per page / Move to the next page if exceeded
Gas and units	Configure gas, range, and unit that matches the detector / Support oxygen channel
Display and record	Concentration, PWR·AL1·AL2·FUT, Status Message, Record/Graph/CSV
Optional configurations	UPS/Battery Indication, External Alarm Output, Control Computer Integration

> Changing only the gas name on the screen and the receiver settings does not change the target of the detector. You must match the actual sensor gas, measurement range, and output method with the receiver settings.

> Please refer to the supplied specifications, nameplate, and approved drawings to verify measurement accuracy, alarm contact rating, external housing dimensions/weight, and protection class. This document does not assign any common ratings that have not been verified.

Appearance and Component Names



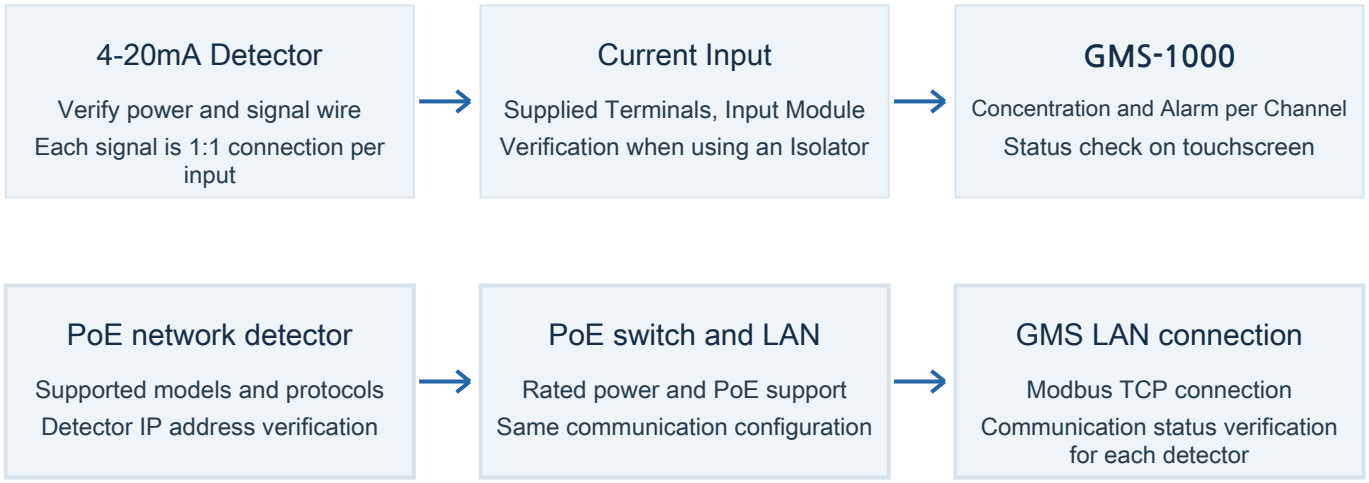
GMS-1000 enclosure example. Screen content, beacon, door and internal configuration vary with the supplied specifications.

Composition	Usage and Verification Notes
Touch Panel	Concentration, Alarm, and Fault Check per Detector, Record Retrieval, and Settings
Alarm Indicator	Operation of the specified configuration, gas alarm, and fault status check
Lower Door and Internal	Power supply, input module, terminals, etc. - Unauthorized access prohibited
Power, Signal, and LAN	Connect according to the physical terminal name and supplied wiring diagram.

> Please verify the color of the alarm light, external connection, and operation according to the supplied output configuration and on-site operating table. Do not judge the internal terminal number or power structure based solely on the appearance in the photo.

Installation and Signal Connection

Before installation, verify the power rating, physical input number, detector power and output format, common wire/protective grounding, and network configuration. Independently connect the signal of each detector to the designated input.



This is a functional connection diagram. Please refer to the supplied wiring diagram for actual terminal numbers, polarity, grounding, circuit breakers, and external outputs.

Verification Items	Verification items for the installation personnel
Installation environment	Match temperature, humidity, condensation, dust, vibration and maintenance clearance to the supplied specifications.
Power and grounding	Verify the use of AC power, grounding, circuit breakers, and UPS.
Current input	Verify the power, signal line, and common line of the detector, as well as the active/passive input and insulation configuration.
Communication connection	Verify the PoE supply conditions, LAN configuration, supported communication models, and detector address.

> PoE is a power supply method via a network cable. Simply turning on the PoE power does not guarantee communication with GMS, and the supported protocol and address settings must also be correct.

Initial Power-On and Monitoring Start

01 Turn on the power after verifying the installation.

Turn on the power according to the delivery power procedure after verifying the wiring, grounding, and detector power, as well as safety measures. Verify that the monitoring program opens after going through the start screen.

02 Create the administrator password for the first time using the device.

For new equipment without a password, enter and save a new password twice in the settings window. For existing equipment, use the password provided by the installation personnel.

03 Verify the number of detectors and their connection method.

In the "Device Settings" → "Channel Settings" section, verify the number of 4-20mA devices and Modbus devices. Compare the displayed sequence number with the actual input number in the delivery channel table.

04 Check the concentration and status.

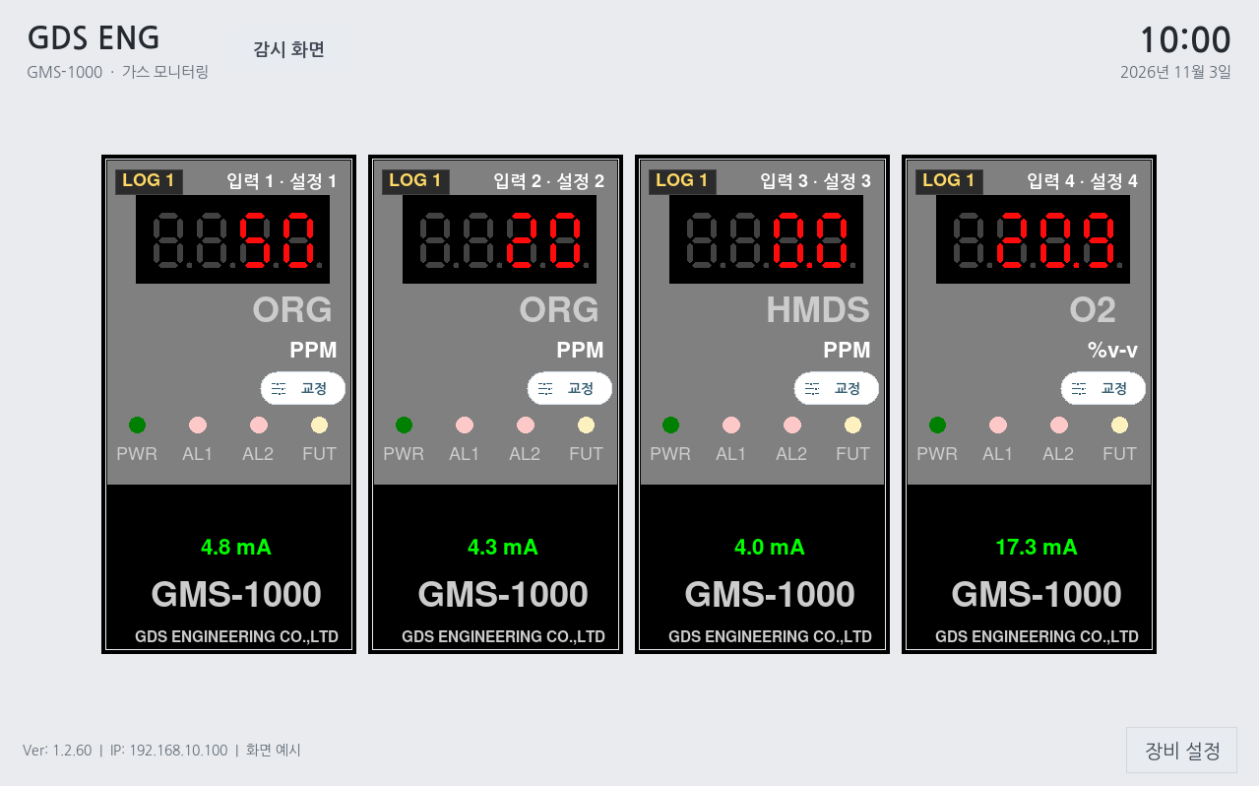
Verify that the gas, unit, measurement range, and alarm values of each detector are consistent. Channels with OFF, no connection, connection check required, or FUT present are not considered normal monitoring.

05 Record commissioning results, then begin operation

Check normal inputs, alarms, faults, external interlocks and logging under an approved procedure. Record the results in the checklist on page 28. Repeat these checks after changes.

> The administrator password is kept by the administrator. Do not write the password on the common manual or on the equipment itself. If you forget the password, please contact technical support.

Reading the Monitoring Screen



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

Screen elements	Items to verify
Concentration and gas name	The measured concentration, selected gas, and unit for the specified detector.
Input number and setting sequence	Correspondence between actual input and screen settings. The assigned number may differ when automatic assignment is used.
PWR·AL1·AL2·FUT	Receiver, gas alarm, and fault status. Please refer to the section on the next page for details.
mA and status indicator	Indication of current channel: display current or fault/connection status
LOG and Calibration	Pressing the concentration display button opens the record window, and pressing the calibration button opens the input calibration window.

> Use the left/right arrows to move between pages when many channels are configured. The screen may switch to the page containing a new alarm. Do not infer a detector's physical location from screen order alone.

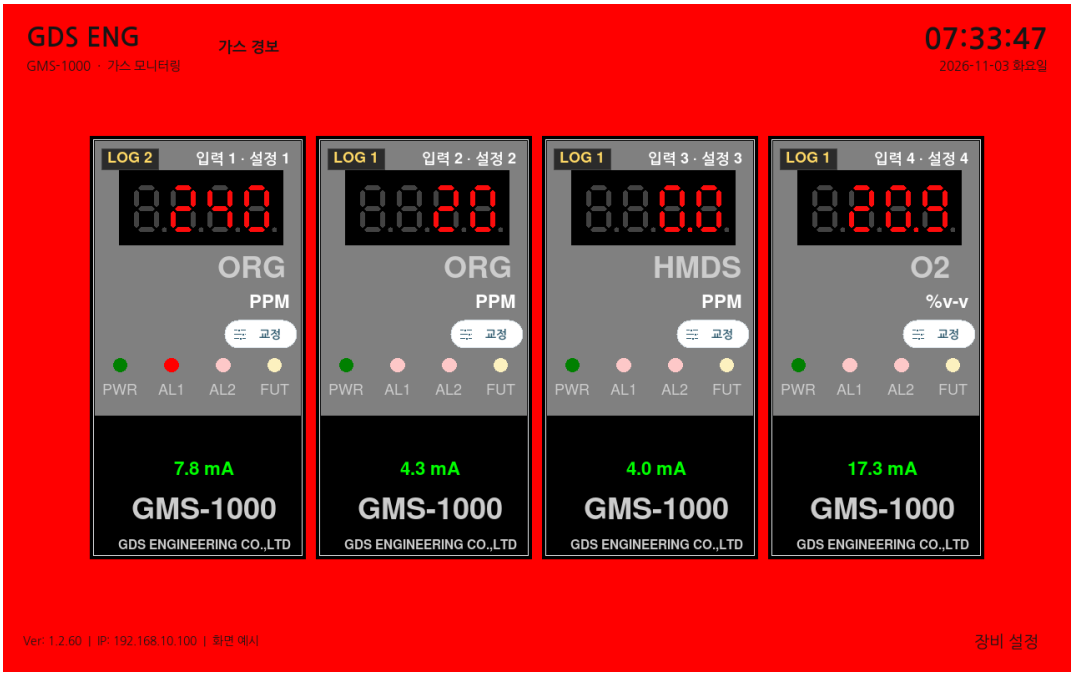
Indicators and connection status

Display	Meaning and Verification Points
PWR	Indicates power/input status or communication connection for current input. This alone does not guarantee normal concentration.
AL1	Stage 1 gas alarm. Verify alarm direction and setpoint for the gas.
AL2	Stage 2 gas alarm. AL1 may also appear during a stage 2 alarm.
FUT	Detector, input or communication fault, or a condition requiring inspection
OFF / Not in use	The monitoring of this channel is not active. Verify the actual wiring and input.
Waiting for connection	Waiting for connection of automatically assigned input or communication equipment.
Connection verification required	The connection status of existing equipment has not yet been verified.
Connection failed	Normal connection is not confirmed. Treat an accompanying ERR or wire-break indication as a fault.

The PWR of the communication detector maintains green when in normal connection, and may briefly display red when receiving new data. Differentiate between this brief reception indication and the AL1 and AL2 gas alarms.

> Small changes in normal current stabilize the display. Since the alarm judgment does not wait for the average of the display, the displayed number and alarm status may differ.

When an Alarm Occurs



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Verify the alarm channel and step.

Verify the upper gas alarm display, AL1, AL2, detector location, gas, unit, and concentration. The entire screen may flash red when a gas alarm occurs.

02 Respond according to the on-site emergency procedure.

Avoid entering the hazardous area and protect personnel according to the on-site procedure, and inform the responsible person. Do not turn off the power or eliminate the alarm by setting or calibration without on-site verification.

03 After normal recovery, verify the records.

Check if the cause has been addressed and the normal input is confirmed again. Record the time of occurrence, concentration, alarm level, and failure status, and verify the monitoring and external connection recovery.

> A previous alarm may remain active after a communication or wire-break error. During a fault, do not treat the last alarm or concentration as a current, valid measurement.

Device Settings Menu

Click "Device Settings" in the lower right corner of the monitoring screen and enter the administrator password. Select the required items and return to the monitoring screen by clicking "Close" after the operation.



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

Menu	Main uses
Channel setting	Detector count, gas type, units, range, alarms and connection history
Wireless Network / Device Diagnostics	Wi-Fi Connection / Verification of Input Board, Sensors, and Program Status
Program Update	Check and install released GMS versions
Password Change / Selection of Alarm Audio	Administrator access and gas alarm sound management
FW, Screen, Restart, Exit	Maintenance and Management of Supported Detectors and Screens/Programs

> Restart, Exit, Network Changes, and Firmware Work can affect detection. Perform necessary actions and prepare for alternative monitoring before the responsible person performs the task.

Setting the Number of Channels and Connection Order



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Verify the number of devices to display

In the channel settings, match the number of Modbus devices and 4~20mA devices with - / +. Use the battery box only when the corresponding delivery option is available.

02 Select the connection order method

Open Connection Order Settings and select Automatic Assignment or Fixed Input Number. Automatic mode assigns detected inputs to configured positions and preserves that mapping after disconnection or restart.

03 Compare and save the input and location

Compare each actual input number beside its configured position with the wiring and channel schedule. Press Save and Apply to save and restart the program. Recheck every channel after restart.

> If you delete the saved connection order and re-assign, the correspondence between the setting number and the actual input may change. Always re-verify the gas, range, and alarm location and installation position.

Confirmation of Initial Connection and Connection History

If the connection history of previously used devices is unclear, a "Connection Verification Required" message may appear. The responsible person who has verified the actual wiring selects the initial connection verification item in the channel settings.

Select	Usage Criteria and Results
Required Verification	Still not verified. Not considered as normal monitoring.
Detector Connected	Actual input where the detector is connected. Register the connection history to monitor disconnection and input failure after.
Verify as Empty Input	Select only when you have verified that there is no detector at the input. This empty input is excluded from the disconnection alarm.

When removing a detector

01 Obtain approval for removal and disable

Verify that the detector has actually been removed and that monitoring at that location is no longer required, and record the changes.

02 Use connection history initialization with caution

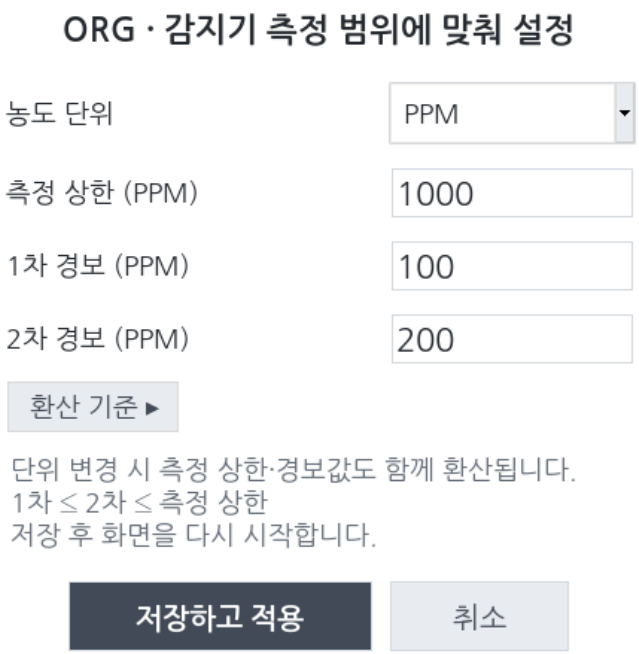
In Connection Order Settings, select Reset Connection History (remove decommissioned detectors), then save. Connected detectors are recognized again. Disconnected inputs may be excluded from wire-break alarms until reconnected.

03 Re-verify all remaining detectors

After saving and restarting, verify each remaining detector's input number, normal concentration and connection status, and confirm that wire-break monitoring has been restored.

> Do not designate the input connected to the detector as a blank input or initialize the connection history to eliminate alarm. Even if the alarm disappears, the detector failure has not been resolved.

Setting Gas Type and Alarm Value



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Select the same item as the actual detector

In Channel Settings, select the gas for the input and press Unit / Range / Alarm. If disabled, first verify a valid input signal and connection status.

02 Enter 20mA upper limit and alarm value

Enter the detector's actual unit, 20mA full-scale limit, and stage 1 and 2 alarm setpoints. Use its nameplate, configuration record and approved site alarm criteria.

03 Verify the results after saving

Press Save and Apply, then also save in Channel Settings. After restart, recheck the unit, range, alarms and actual display.

> PPM and %v-v are volume ratio units, and %LEL conversion requires the concentration of the gas (PPM) based on 100%LEL. Do not arbitrarily enter similar gas names or the reference value of other sensors.

Setting and Alarm for the Oxygen Channel

The oxygen channel should select O2 and match the output range of the detector and volume ratio unit. Unlike the alarm for general gases, oxygen deficiency monitoring triggers an alarm when the concentration decreases.

In the direction of decreasing oxygen concentration

Normal example	Stage 1 alarm	Stage 2 alarm
20.9%v-v	19.5%v-v or below	18.0%v-v or below

Item	Example of GMS default settings
Gas / Unit	O2 / %v-v
20mA Measurement Upper Limit	25.0%v-v
Stage 1 alarm	19.5%v-v or below
Stage 2 alarm	18.0%v-v or below
Normal ambient-air reference	Oxygen approximately 20.9% v/v. Verify actual site conditions and detector status separately.

The above values are examples of default program settings and do not replace any legal standards or approved settings for the site. Verify the range of the delivered detector and site safety standards when setting.

> Do not adjust the oxygen channel to match 20.9% of normal air to ZERO 0%. Calibration of the oxygen SPAN and GMS's 4mA ZERO / 20mA FULL calibration are separate tasks.

> Do not use %LEL in the oxygen channel. Even if displayed in PPM, verify the direction of the oxygen deficiency alarm. Requirements for monitoring high oxygen concentrations should be verified separately through the delivered alarm configuration.

Preparation and Verification Before Calibration

GMS input calibration sets the reference used to convert received current into concentration. It does not replace standard-gas calibration of the detector sensor. Trained personnel must use a reference instrument and an approved test procedure.

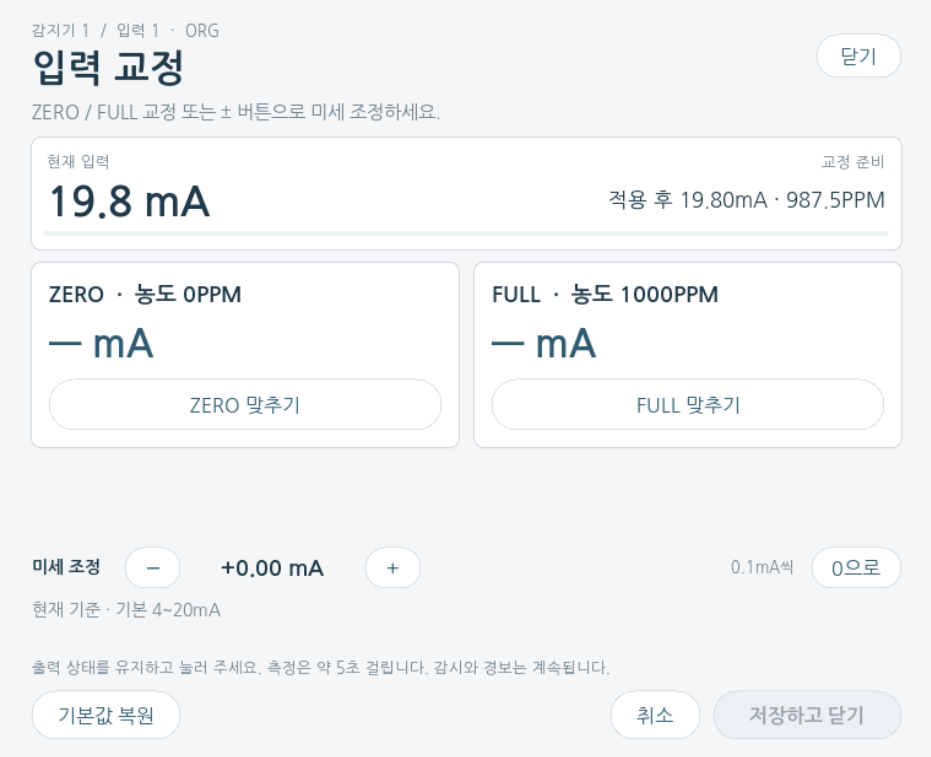
Verification Items	Preparation and Judgment Criteria
Reference Input	Approved test output of the detector or suitable current calibrator
Verification	Actual input number, gas, unit, 20mA upper limit, and alarm value
Normal signal	Verify that there is no open circuit, sensor/communication failure, range exceeded, or unstable signal.
Interlock management	Notify personnel, manage interlocks and alternative monitoring, and plan restoration after testing.
Record	Reference values before/after calibration, responsible personnel, time, and actual results

Select which calibration to use

Method	When using
ZERO / FULL	When matching both the 4mA and 20mA reference points
Fine adjustment - / +	When correcting for a small residual difference compared to the reference measurement instrument by a certain amount
Restore default values	To remove additional ZERO/FULL and fine adjustments and return to the default reference

> The default circuit calculation remains based on the internal product settings. Resetting to 0 or the default value does not change the default circuit. Do not attempt to solve leakage, oxygen, or wiring problems with calibration.

ZERO and FULL Calibration



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Open the calibration screen for the specified input.

Press Calibration on the monitoring card and enter the administrator password. Verify that the detector position, actual input number and gas match the intended input.

02 Adjust ZERO and FULL separately.

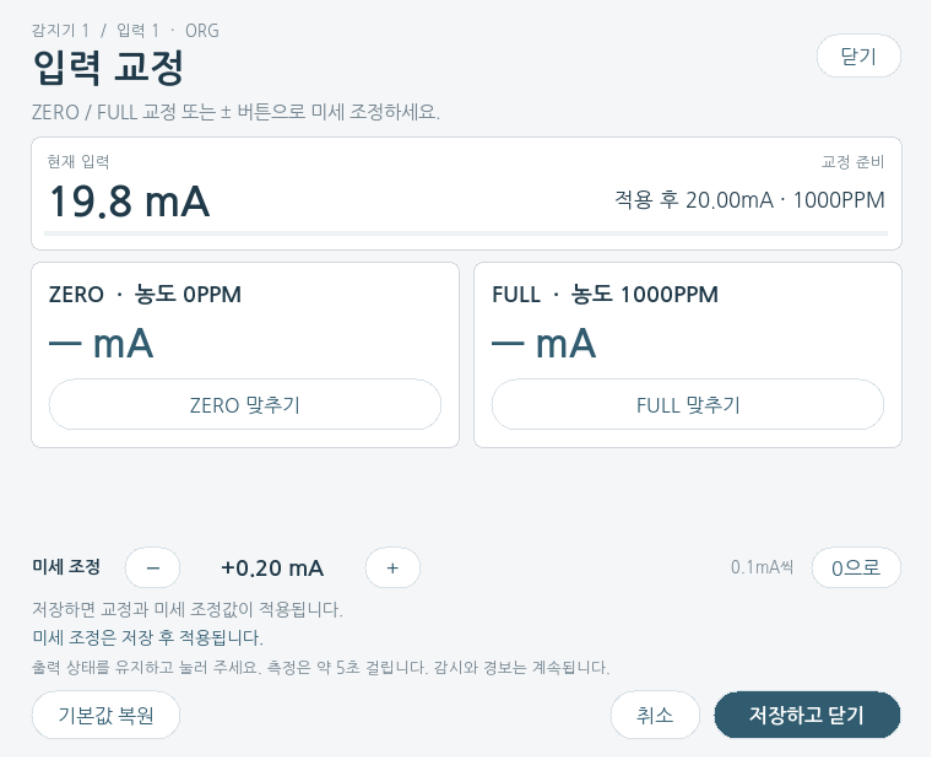
Apply a valid reference output of approximately 4mA. Press Adjust ZERO and maintain the input for approximately 5 seconds. Change to approximately 20mA, press Adjust FULL and maintain the input in the same way.

03 Save after verifying the preview.

Verify the current and concentration at both reference points after applying the changes, and then save and close. If the input is interrupted or varies significantly, check the wiring and test conditions and measure again.

> FULL corresponds to the current set measurement limit. The ZERO for O2 is 0%, and the FULL is the 20mA upper limit of the sensor. If you cancel or simply close the window, the new reference will not be applied.

Fine Adjustment of Current



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Prepare the normal input and reference values.

Open calibration with a valid input that can be compared with a reference instrument. Do not adjust an input with a fault signal or an uncertain connection status.

02 Adjust by - / + in increments of 0.1mA.

+ increases the applied current, and - decreases it. The adjustment range is -5.0 to +5.0mA. Adjust as needed, observing the applied current and concentration on the screen.

03 Save or cancel.

Press Save and Close to apply changes. Set to 0 resets only the fine adjustment to 0 and takes effect after saving. Cancel retains the existing value.

> Fine adjustments can be used without re-measuring the two reference points and are saved for each actual input. For example, +0.1mA at the upper limit of 1,000PPM corresponds to 6.25PPM in calculation. Fault detection takes precedence over calibration values.

Connection of PoE and Communication Detector

Supported communication sensors are connected via the site LAN. First, verify that the PoE switch, sensor power, and GMS are on the same communication network.

01 Prepare the communication sensor channel.

In "Device Settings → Channel Settings", match the number of Modbus devices and save. Verify the corresponding device address input field displayed on the monitoring screen.

02 Select the sensor IP and connection icon.

Enter the IP address assigned to the sensor and press the corresponding connection icon. You can enter numbers and decimal points using the on-screen keyboard. Do not use duplicate addresses.

03 Verify communication and measurement items.

Verify the PWR receive indicator, concentration, unit, range, AL1, AL2, FUT, and sensor version. Even if connected to communication, verify that the displayed gas, unit, and range are also consistent.

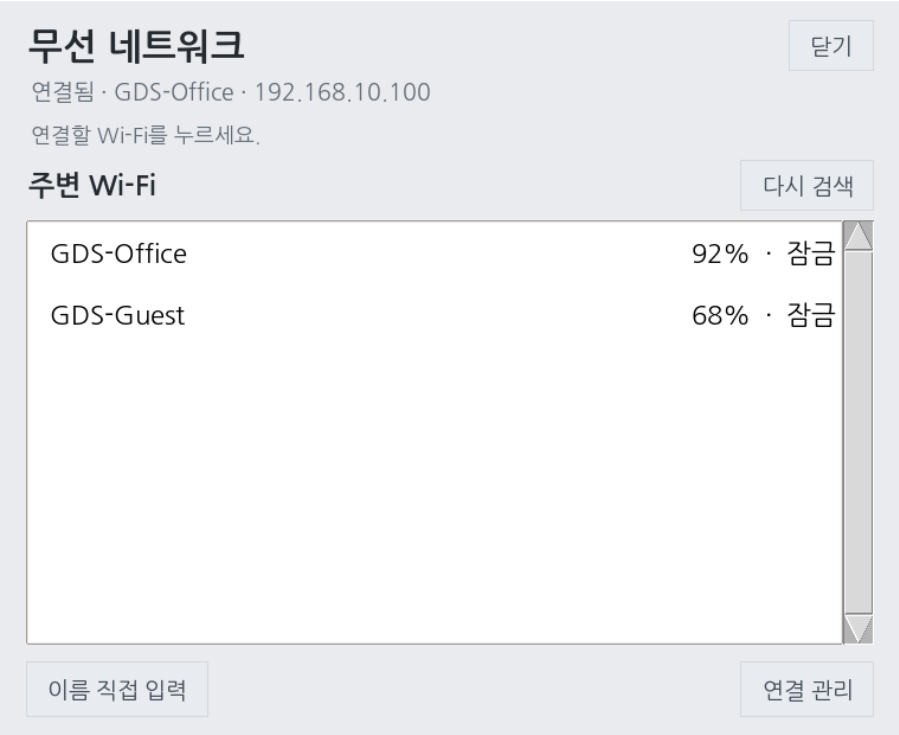
04 Verify the cause of connection failure.

Verify power, cable, switch, IP address range, address conflicts, and supported models and network access conditions. Do not assume that channels in automatic reconnection are in normal monitoring mode.

Situation	Information to verify
Address change	Record the IP and channel location before and after the change, and consult with the network administrator.
Communication failure	Verify the actual equipment and LAN status. Do not use the last measured value as the current value.
FW, ZERO, RST, model change	Service functions of supported models. Performed by the responsible person according to the detector's manual and approval procedure.

> PoE power supply and Modbus TCP communication are separate conditions. Communication equipment that is not supported may not connect even if the cable or power supply is the same.

Wireless Network Connection



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Select the surrounding Wi-Fi

Open "Wireless Network" in Device Settings. Select the desired name from the list, enter the password, and click "Connect".

02 Use hidden names and saved connections

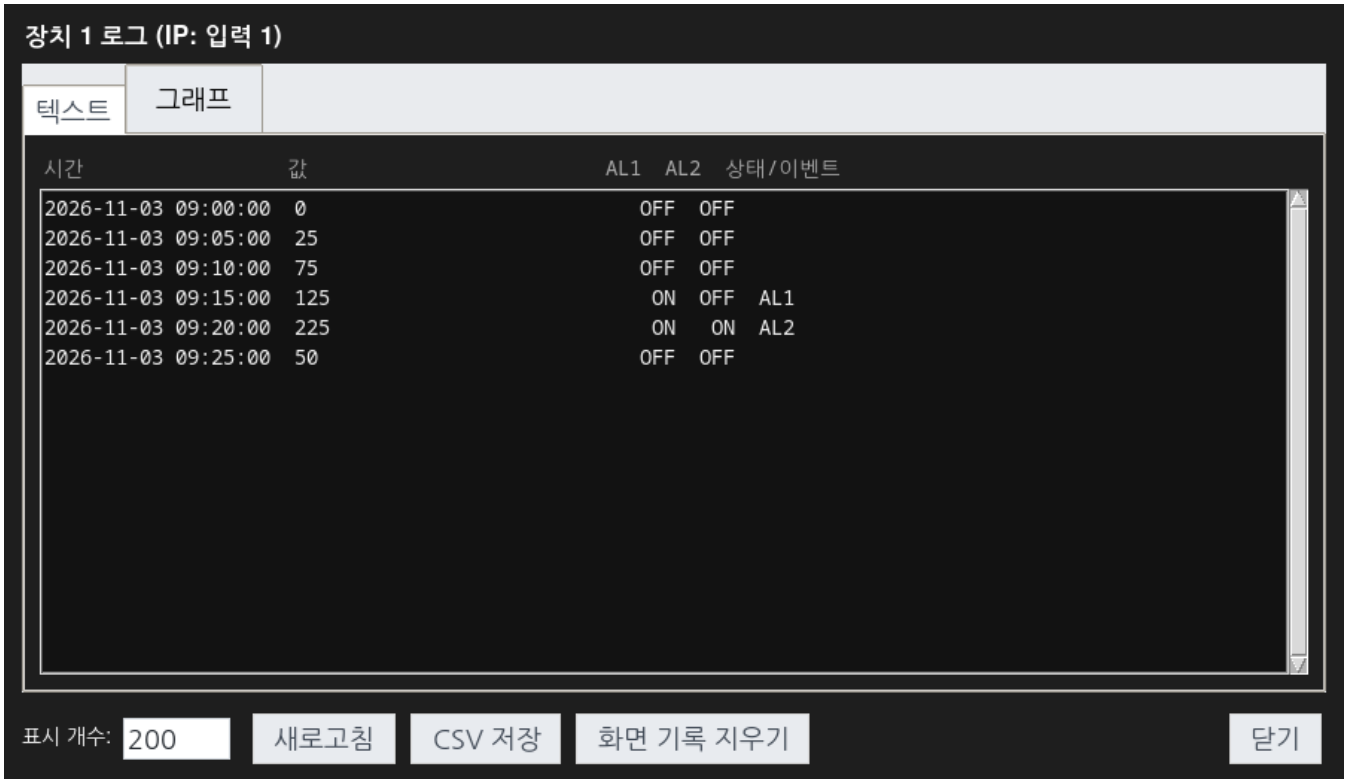
Hidden Wi-Fi uses direct name input. Saved Wi-Fi can be reused, and if the password has changed, use "Change Password". The "Connection Management" menu manages saved connections.

03 Verify the connection result and device address

Verify the successful connection and IP address, and re-verify the detector communication and monitoring connection. If it fails, check the router power, name, authentication method, and signal status.

> Communication with the detector or remote monitoring may be interrupted during Wi-Fi switching. Corporate authentication may require setting an administrator profile. The current connection cannot be deleted in Connection Management.

Retrieving Detector Records



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Open the record of the detector to be verified

Click on the concentration display or the LOG area on the monitoring screen for the corresponding detector. Verify that the device number, input, and address in the record window are the same as the target.

02 Verify time and value

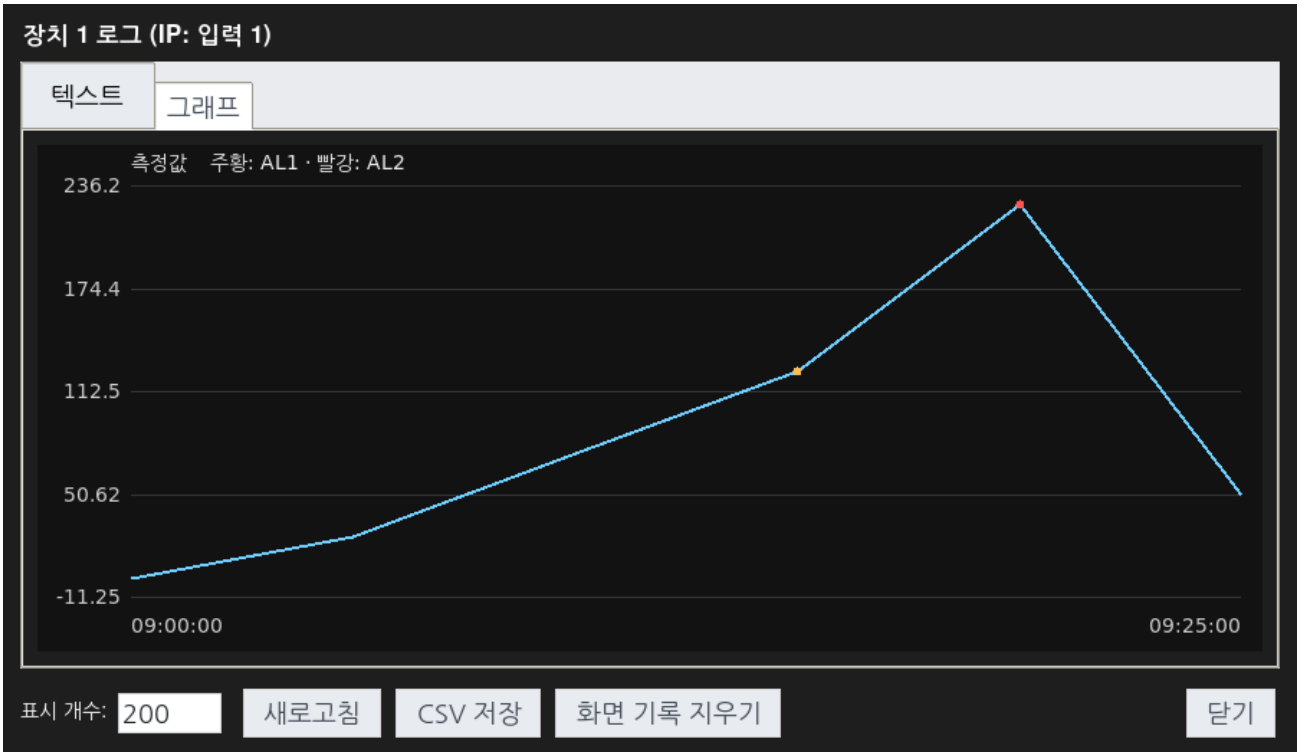
Verify the measurement time, concentration, AL1, AL2, and status/event in the text. Adjust the display count and refresh the recent record.

03 Differentiate between retrieval and deletion

To view another detector, close the window and reopen it from that detector. Confirm before using Clear Screen Records. Previously saved CSV files are retained.

> The window shows recent records. For long-term retention, save a CSV and verify the timestamps, channel, gas and unit.

Saving Graphs and CSV



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

Operation	Results
Press the concentration display / LOG area	Open the record window for the selected detector
Text / Graph	Verify the same input's time, value, alarm, and status in a list or trend
Record count / Refresh	Adjust the number of recent records on the screen and refresh the current record
Save to CSV	Save the record file to the selected location. Verify the save path and file opening
Clear screen record	Delete only the recent records on the screen. The saved CSV file is retained

> Abnormal or communication error sections will not be displayed as normal concentration. The raw input diagnostic values in the CSV and the calibrated values on the screen may differ. Differentiate between the recent record in the current window and the long-term stored CSV.

Program Update



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Secure working time and verify the version

Prepare for backup monitoring and power/network status. Check the current version and deployment list in Device Settings → Program Update and click "Confirm New Version".

02 Select the required version

Click "Install Selected Version" and confirm. Wait for the Prepare, Download, Check, and Restart steps. Do not turn off the power even if the screen is temporarily closed.

03 Verify normal monitoring after restart

Verify the new version display and channel, gas, range, alarm, and communication. If failure occurs, record the displayed steps and messages. Also, verify normal monitoring after restoring the previous program.

> Selecting Yes in the New Update notification at the bottom starts an installation request without another password check. In 10 Minutes postpones the notification. Do not consider installation complete until progress reaches 100% and normal operation is verified.

Diagnostics and Maintenance Menu

Function	Verification and Operation Criteria
Equipment Diagnostics	Check the connection of sensors/input boards, errors, and the readiness for program and update. Record the time and screen when an error occurs.
Password Change	Administrator enters and saves the new password and verification value. Verify access and storage after change.
Select alarm audio	Select the alarm sound that can be played on the device. Test the actual speaker and volume, and alarm playback.
Apply the entire firmware file.	Select approved firmware for a supported network detector. This is separate from updating the GMS program.
Perform full firmware update.	Only personnel who have verified model, connection and file compatibility may proceed. Maintain power, communication and the program throughout the update.
Restart / Shutdown	Perform after managing monitoring gaps and alternative monitoring. Verify normal monitoring after restart.
Full screen / Window size	Adjust the display mode of the control screen. Verify that important alarm and setting buttons are visible.
Battery box	Verify the voltage and remaining capacity displayed when configuring UPS options. Independently check the label and battery status, and actual supply status.

Difference between firmware and program update

Program updates replace the GMS screen and monitoring program. Firmware updates, ZERO, and RST are functions that send commands to the connected supported detector. Do not perform in bulk without verifying the detector model and on-site procedures.

> Even if the input board is displayed as connected in the diagnostics, it does not mean that the detector's normal current, wiring, and gas measurement performance have been verified. Perform calibration, signal test, and on-site measurement separately.

Display of Faults and Actions

The following code is the 4-20mA input display standard for GMS v1.2.60. Verify the detector's own error code and current output specifications in the corresponding detector documentation.

Display	Meaning	Verification sequence
ERR / Not Connected Open circuit	Open circuit / Low current input	Detector power → Input line → Common line → Terminal → Reference current
E-23	Input judged as poor suction	Detector flow, tube, filter, and pump, and actual output status
E-10	Input judged as sensor failure	Detector sensor, output code, and status, sensor connection
E-12	Input identified as communication failure	Internal/external communication and output, and settings of the detector
Upper limit exceeded input / FUT	Input exceeding the upper limit	Verify actual gas hazard and then check range and output
ERR / --.--mA Communication error	Delay in reading input board or receiving	Check power, signal, and input board, and diagnostic messages
Connection verification required	Connection status not verified	Verify actual wiring and perform procedure on page 14
Verify calibration settings Storage error	Error in saving calibration or settings	Record reference value, storage space, permissions, and diagnostic messages, and contact

01 Record distinguishing between gas alarm and malfunction

Record the channel, actual input number, displayed code, mA value, event time and the detector's own display together.

02 Verify from the basic cause

Check power, connection, communication, range, and malfunction codes. If the cause is not confirmed, follow on-site safety procedures and technical support guidance.

> Do not erase input history or designate as blank input to hide errors. If the error is not resolved, do not return to normal monitoring.

Connection to Control Computer



Screen Example | GMS v1.2.60. Address, concentration, and status are example values.

01 Open the control program on the same internal network

Connect the computer using the GMS Control Room and GMS equipment to the same communication network. Open "Equipment Settings → Control Room Connection" on the corresponding equipment.

02 Select the equipment and issue the connection code

Select the GMS found in the connection of the control computer. Click "Issue Connection Code" on the equipment screen and enter the displayed 6-digit number on the control computer.

03 Verify connection completion and detector display

The code is valid for 2 minutes and can be used once. Closing the window cancels it. After connection, verify the equipment, detectors, concentrations, alarms and data updates on the monitoring computer.

> This function is used depending on the supported control program and internal network configuration. Do not share the connection code and access information externally. Also, verify the reception delay and offline display on the control screen, and do not assume that the site is normal only with a remote screen.

Trial Run and Regular Inspection Checklist

After installation, configuration changes, calibration, and updates, verify the following items: Establish regular inspection intervals according to the detector manufacturer's instructions and site plan, and perform additional inspections after exposure to abnormalities, sensor replacement, and wiring changes.

Verification Items	Verification content	Results / Notes
Installation and Label	Model, Power, Ground, and Wiring Diagram Match	
Input Correspondence	Location, Detector, Actual Input, and Screen Number Match	
Detector Power	Power, PoE Supply, and Battery Option Status	
Measurement and Units	Actual Gas, Range, Unit, and Concentration Match	
Connection Status	OFF, Verification Required, Connection Not Established - Check the Cause	
Gas Alarm	Verify the operation of AL1 and AL2 under the approved conditions	
Fault Monitoring	Verify wire-break and communication-fault indications and recovery.	
Alarm Output	Verify the sound, alarm, and external integration for the corresponding configuration	
Calibration Value	Verify the result after applying the standard current	
Record Storage	Save and verify text, graphs, and CSV files	
Restart recovery	Verify recovery of settings, mapping, and calibration values and monitoring	
Remote monitoring	Verify connection, data updates and fault indication for the installed option	

Inspection date _____ / Inspector _____
Site / Equipment number _____

> Alarm and output testing must be performed after consultation with relevant personnel and site safety measures. After testing, ensure all connections and monitoring are restored to normal and retain the inspection results.

Setting Records and Technical Support

Record items	Site record
Site / Installation location	
Product number / Supplied configuration	
GMS version / Detector model	
Input number / Detector address	
Gas / Unit / Maximum measurement	
AL1 / AL2 and alarm direction	
ZERO / FULL / Fine adjustment value	
Inspection date / Inspector / Next inspection date	

Preparations before contacting

Prepare product number, program / detector version, channel and actual input number, time of occurrence, display code / mA / concentration, wiring, power, and communication check results, and screenshots. Password and connection codes are not included in the contact materials.

Technical Support

GDS ENG Co., Ltd.
Tel. 031-731-0218 / Email gdseng@gdseng.co.kr
Room 605, Bldg. B, Ssangyong IT Twin Tower
531 Dunchon-daero, Jungwon-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
gdseng.co.kr

> Document reference: GMS-1000 product information on company website, GMS v1.2.60 official release screen and operation. The document format was based on the MCU9000S and CC-200 user manual. Rev.1.0 / 2026.11.03 First created. Please refer to the supply contract and manufacturer's instructions for warranty and repair conditions.