

**Smart Gas Detector Monitoring Unit with Four Channels**

# GMS - 1700 - Receiver



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## 1. Introduction

### 1.1 Product Overview

The GMS-1700 is a gas alarm system designed to effectively monitor gas leakage in complex environments. It utilizes a network of gas detectors, each directly connected to a dedicated receiver in the integrated panel. These detectors simultaneously transmit concentration signals to a central monitoring unit, ensuring real-time data collection and analysis.

### 1.2 Product Description

Introducing the GMS-1700 Gas Alarm System, a cutting-edge solution for comprehensive gas monitoring in complex industrial environments. With its 1:1 connection method, high-resolution A/D converters, and flexible output options, the system ensures accurate data representation and seamless integration with external devices. Customizable programming, a prominent multi-points LED display, and a built-in lithium-ion battery further enhance its functionality and reliability. Designed to withstand extreme weather conditions, the GMS-1700 guarantees top-notch safety and efficiency in gas leak detection and response. Trust the GMS-1700 for advanced gas monitoring and peace of mind in your industrial operations.

## 2. Product Features

- **Multi-Point Gas Detectors Receivers**

In the GMS-1700 gas alarm system, multiple gas detectors and receivers are consolidated in a central location using 1:1 connection method. Each gas detector is directly linked to its dedicated receiver, facilitating a streamlined and efficient network configuration. The use of a multi-point receiver in conjunction with the 1:1 connection method enhances the system's efficiency and accuracy, making the GMS-1700 an advanced and effective gas monitoring solution for complex industrial environments.

- **High-Latitude 1.8-Inch Multi-Color LED Display**

The GMS-1700 gas alarm system features a high-latitude 1.8-inch dual-color LED. The 1.8-inch character height ensures clear visibility of gas concentration readings and alarm statuses even in challenging environmental conditions. The multi-color capability enables the LED display to switch between distinct colors, typically green, red and orange to convey different information to the user.

**Green Display:** The LED display shows a green color in normal operating conditions. This indicates that the gas concentration levels are within safe and acceptable limits, and there are no alarms or faults to be concerned about.

**Orange Display (Blinking):** The LED display shows an orange color with a blinking effect to indicate a fault or system issue. This alerts the operator to potential problems with the gas alarm system itself, such as sensor malfunction or communication errors.

**Red Display (Blinking):** When the gas concentration exceeds the predefined alarm thresholds (AL1 or AL2), the LED display turns red with a blinking effect. This indicates the presence of a potentially hazardous gas level, requiring immediate attention and action to address the gas leak.

- **Analog 4-20mA Transmitter**

The GMS-1700 employs advanced technology to simultaneously receive 4-20mA analog continuous signals from multiple gas detectors. These analog signals are generated by the detectors to represent the gas concentration levels they detect. The system is equipped with high-resolution A/D converters that have the capability to convert the continuous 4-20mA analog signals into discrete digital values with excellent accuracy and resolution. This accurate conversion is essential for reliable gas leak detection and monitoring, as it allows for precise data analysis and identification of potential hazards

- **Customized Monitoring Environment**

The GMS-1700 features a versatile microprocessor that empowers users to customize their monitoring environment. They can program functions such as defining AL1 and AL2 alarm thresholds, setting alarm delay times, calibrating gas detectors, configuring output options, logging data, conducting self-diagnostics, and enabling communication with external devices. This flexibility ensures a tailored gas monitoring system that aligns with specific needs and enhances overall safety measures.

- **High-Resolution D/A Converter**

The GMS-1700 utilizes a high-resolution D/A converter to generate a precise 4-20mA standard current signal. This accurate signal is then transmitted to an external controller, such as a Programmable Logic Controller (PLC) or a Direct Digital Controller (DDC).

- **Relay Output function**

The GMS-1700 offers an AL1 and AL2 alarm functionality, and as part of this feature, it provides AL1 and AL2 Relay Output functions. These relay outputs are designed for seamless interworking with other devices, such as FANs and external alarm devices.

- **Battery (Optional)**

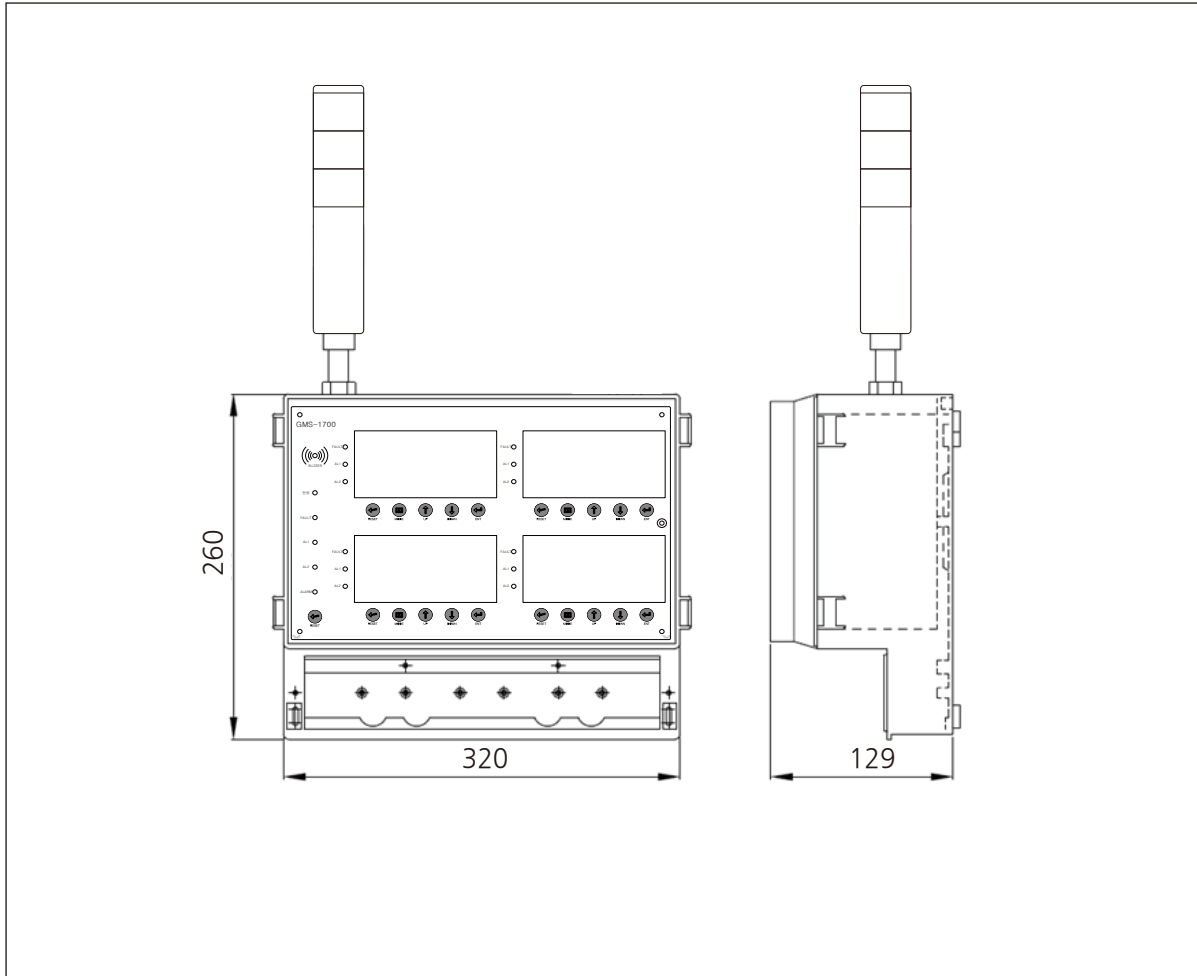
The GMS-1700 is equipped with a built-in lithium-ion battery, enabling continuous operation even during electrical power cuts. This feature ensures that the gas alarm system remains functional and reliable, providing uninterrupted gas monitoring capabilities in critical situations when the main power supply is disrupted. The inclusion of the lithium-ion battery enhances the system's resilience and ensures constant vigilance for gas leakage detection, promoting safety and peace of mind in industrial and commercial settings.



### 3. Product Specifications

Product Code	GMS-1700
<b>Display</b>	Three Color 1.8-inch, three digits, Seven Segment. Normal (Green), AL1 (Orange), AL2 (Red) * Blinking
<b>Monitoring System Structure</b>	Alarm Unit: 1, Receiver: 4
<b>Detectors Connection Type</b>	For multi-point type (4 connected detectors)/4 circuit
<b>Input power</b>	AC 100~240 VAC/60 Hz
<b>Battery Power</b>	DC 24 V 2.5 AH
<b>Input Signal</b>	4-20 mA DC/ F. S
<b>Output Signal</b>	4-20 mA DC/F. S
<b>Output Voltage</b>	24 V (5A)
<b>Back Up power (Battery)</b>	Optional (DC 24 V for 40 min)
<b>Alarm Signal</b>	Low Alarm - AL1 (RED) High Alarm - AL2 (RED) Failure alarm - FAULT LED (YELLOW)
<b>Alarm Method</b>	Time - LED blinking Hearing - Buzz Bass (over 80dB)
<b>Alarm Value Setting</b>	AL1, AL2 2-stage alarm-user arbitrarily set
<b>Alarm Delay Time</b>	0~99 sec user arbitrarily set
<b>Temperatures &amp; Humidity Range</b>	-10°C ~ 50 °C, 5 ~ 95% RH (Non-condensing)
<b>Clear Alarm</b>	Manual and automatic return
<b>Alarm Output</b>	2-stage (AL1, AL2) alarm RELAY CONTACT
<b>Installation Method</b>	Wall Mounting,

## 4. Dimensions



Unit: mm