

# Multi Type Smart Gas Detectors Controller Unit

## GMS-2500-Receiver



**GASDNA Co.,Ltd** 101, Bukhang-ro 193beon-gil, Seo-gu, Incheon, 22856, Republic of Korea  
Tell: +82-32-584-7420 Fax: +82-32-584-7424 E-mail: sales@gasdna.com Web: www.gasdna.com

<http://www.gasdna.com>

## 1. Introduction

### 1.1 Product Overview

The GMS-2500 is a multi-channel gas alarming unit designed to monitor gas leakages from multiple gas detectors simultaneously. It consists of one alarming unit and several receiving units. The purpose of the alarming unit is to receive density signals from external gas detectors. These gas detectors are placed in different locations to monitor potential gas leaks. Each receiving unit in the GMS-2500 receives these density signals from the respective gas detectors. When the density of gas in any of the monitored areas becomes higher than the pre-defined alarm value, the receiving units automatically send a signal to the alarming unit. The alarming unit is responsible for sounding an alarm to notify individuals in the vicinity that there is a gas leak, prompting them to take appropriate safety measures. Overall, the GMS-2500 enhances safety by enabling simultaneous monitoring of multiple gas detectors and providing timely alarms and data transmission to control systems for appropriate responses to potential gas leaks.

### 1.2 Product Description

GMS-2500 also offers relay output and standard current output signal (4-20mA) transmission capabilities. This allows the unit to communicate with various controllers such as Programmable Logic Controllers (PLCs), Direct Digital Controllers (DDCs), recorders, and computers. By integrating with these systems, the GMS-2500 contributes to the formation of an integrated gas monitoring system. The relay output can be used to trigger specific actions in the connected controllers, such as shutting down equipment or activating ventilation systems when a gas leak is detected. On the other hand, the standard current output signal (4-20mA) can provide continuous data to the connected controllers, allowing them to monitor and record gas density levels over time.

## 2. Product Features

- **Multi-Point Gas Detectors Receivers**

Centralized gas monitoring is a highly effective approach that involves connecting multiple gas detectors to a central monitoring system. This system allows for comprehensive and simultaneous monitoring of gas levels in various locations within an industrial facility or any environment where gas leaks can occur. By connecting more than one gas detector to the central monitoring system, operators gain a complete and real-time overview of the gas concentration levels throughout the monitored area.

- **Analog 4-20mA Transmitter**

The GMS-25000 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.

- **Relay Output function**

The GMS-2500 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.

- **Customized Monitoring Environment**

The GMS-2500 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-2500 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).

- **Bar Graph Display (Optional)**

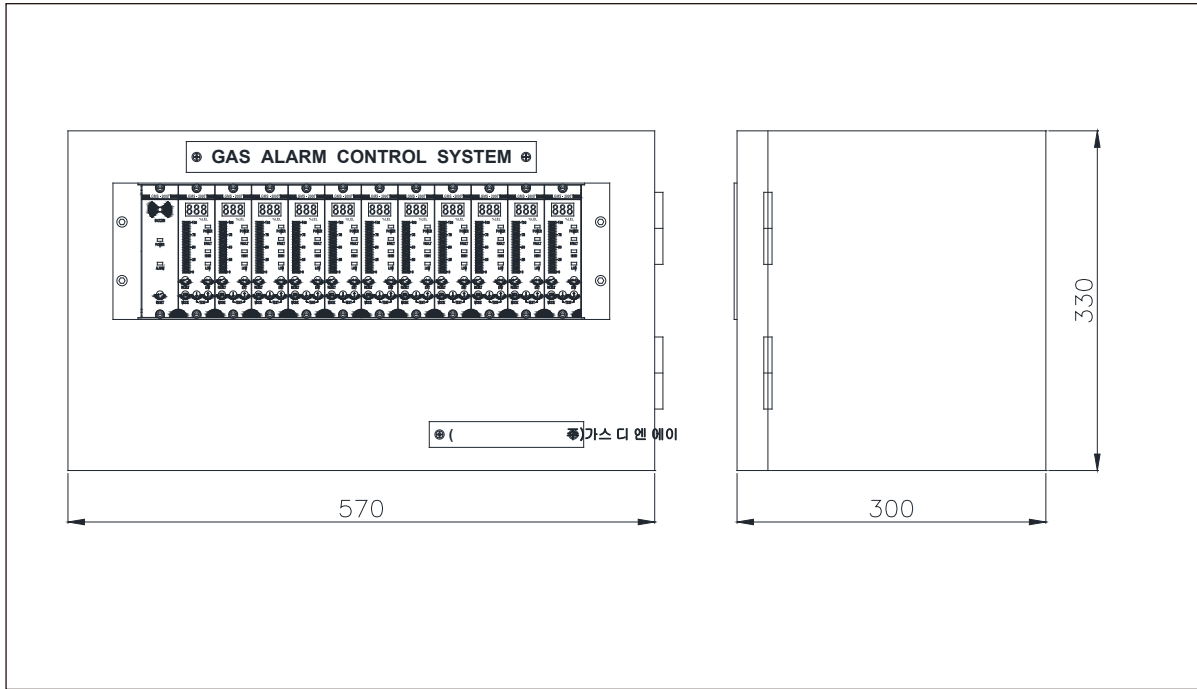
A bar graph is an effective way to display the alarming density for maximum visual impact. By using bars of varying lengths to represent different gas density levels, the graph provides a clear and easily interpretable visual representation of the data.

### 3. Product Specifications

Product Code	GMS-2500	
	Alarm Unit (Power Unit)	Receiving Unit
<b>Product Structure</b>	DIN Type	DIN Type
<b>Control Structure</b>	Alarm: Indicator 1:1-64	Indicator: Sensor= 1:1
<b>Expansion Type</b>	Slide Card type	
<b>Input power</b>	AC 230V, 50/60 Hz	
<b>Output Power</b>		24 V (250mA)
<b>Input Signal</b>		4-20 mA DC/ F. S
<b>Output Signal</b>		4-20 mA DC/F. S, RS-485 (Optional)
<b>Density Indicator</b>		F.N.D Display % LEL(Combustive), % (O2), PPM (Toxic)
<b>Alarm Signal</b>	AC 230V, 50/60 Hz	Low Alarm - AL1 (RED) High Alarm - AL2 (RED) Failure alarm - FAULT LED (YELLOW)
<b>Alarm Method</b>	Alarm: Indicator 1:1-64 Alarm: Indicator 1:1-64	Alarm LED On/Off
<b>Alarm Delay Time</b>		0~99 sec set by User
<b>Alarm Density</b>		High/Low 2 Step Alarm Density- Set by User
<b>Temperatures &amp; Humidity Range</b>	-20°C ~ 60 °C, 5 ~ 80% RH (Non-condensing)	
<b>Clear Alarm</b>	Manual and automatic return	
<b>Alarm Output</b>	SPST Relay output for High/low 2 Steps SPST Relay output for Fault Alarm	
<b>Exterior Structure</b>	Alarm: Indicator 1:1-64	
<b>Output Option</b>	Alarm: Indicator 1:1-64	

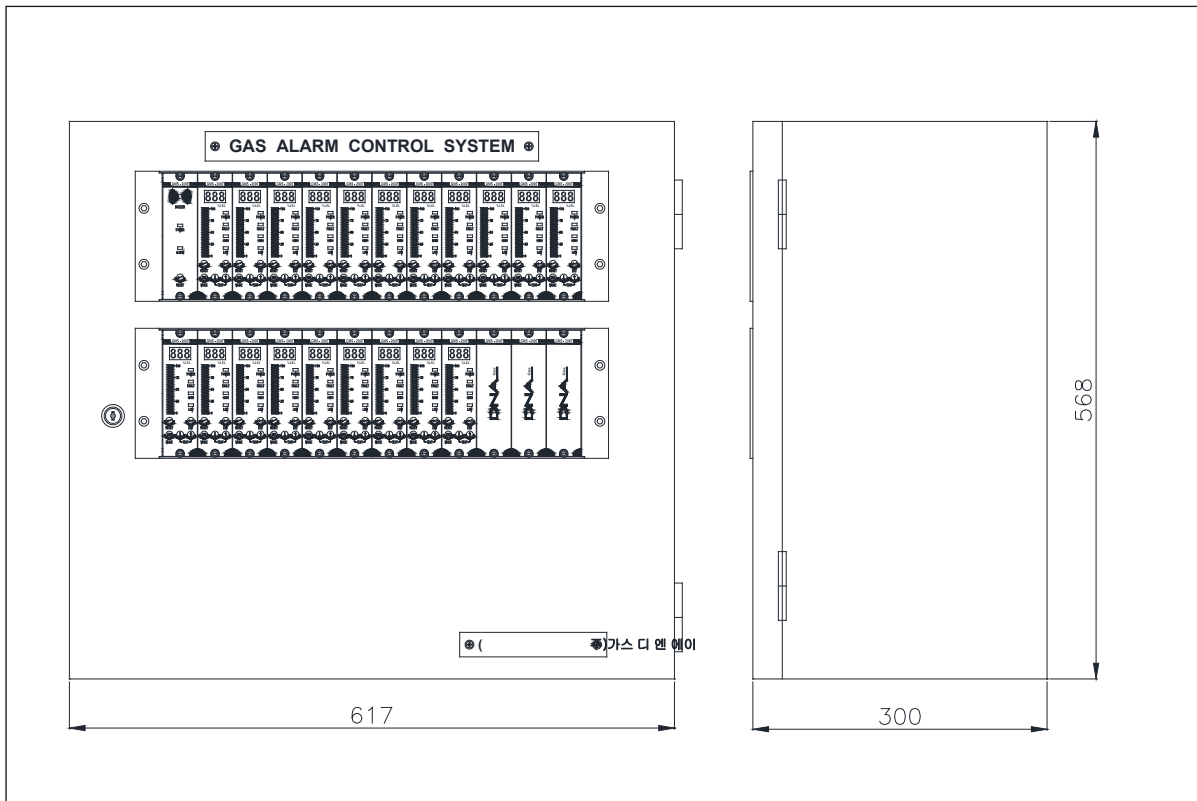
## 4. Dimensions

### 4.1 Drawing for 11 Channel



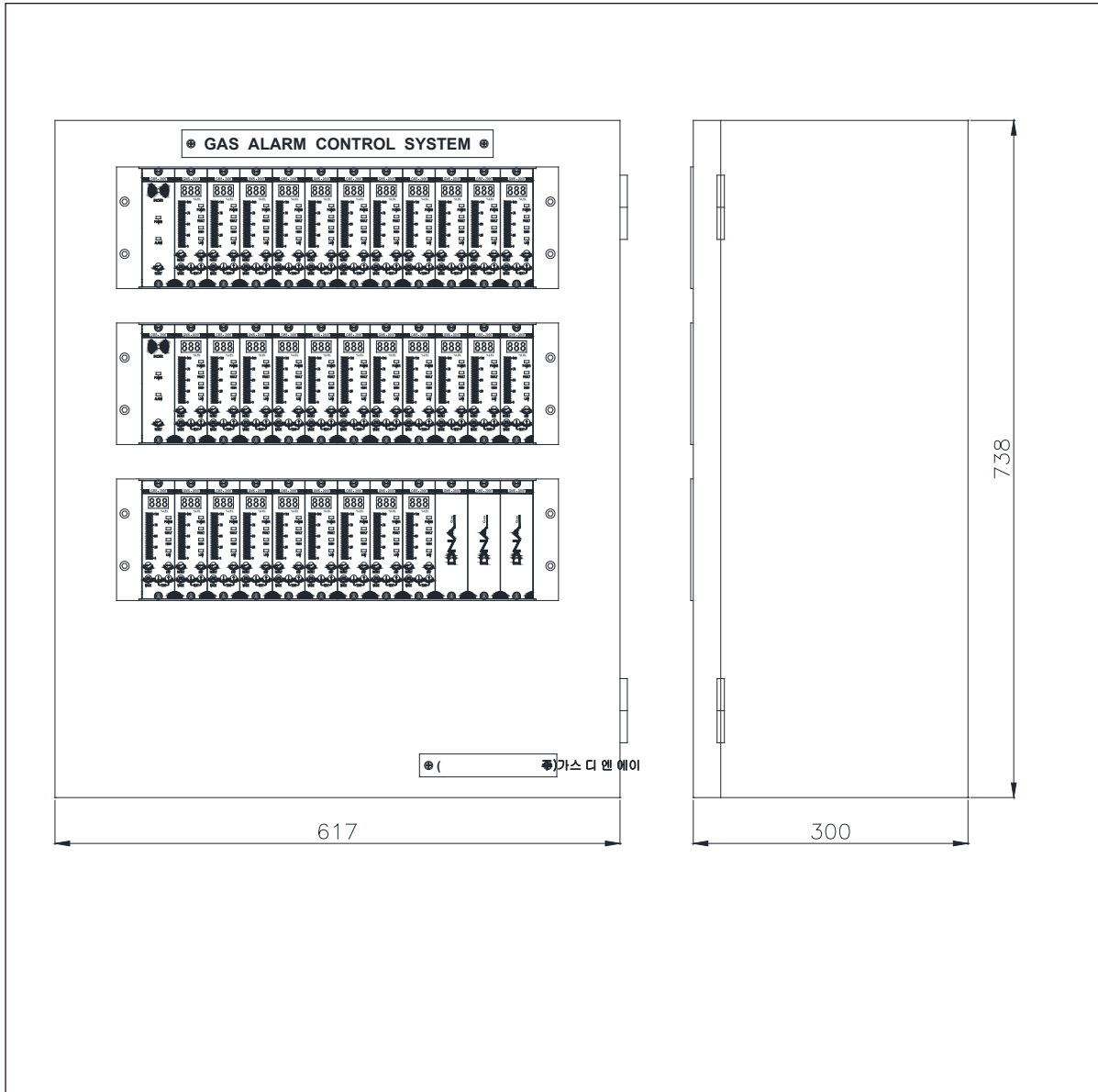
Unit: mm

### 4.2 Drawing For 22 Channel



Unit: mm

4.3 Drawing for 33 Channel



Unit: mm