Multi-Channel Digital Controller

GMS - 2500

GASDNA

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

CONTENTS

[Introduction]

GMS-2500 is multi-channel gas alarming unit to monitor gas leakages from more than one gas detectors simultaneously. GMS-2500 is composed of one alarming unit & more than one receiving units. While each receiving units in GMS-2500 receive density signals from external gas detectors, when the density becomes higher than alarm value, receiving units automatically give signal to alarming unit to sound alarm.

GMS-2500 transmits the relay output and standard current output signal 4-20㎃ to various controllers such as PLC, DDC, recorders, and computers for composition of integrated gas monitoring system.

[Features]

◈ Centralized gas monitoring is available by connection with more than one gas detectors.

◈ Receiving 4-20㎃ analogue continuous signals from more than one gas detectors simultaneously and displaying the digital signals accurately by built-in high resolution A/D converter.

◈User programming alarm range, alarm delay time, and so on, by built-in micro processor.

◈Bar graph displays the alarming density for maximum visual effect.

◈Built-in high resolution D/A converter for accurate transmission of 4-20㎃ standard current output signal to external controllers (PLC/DDC).

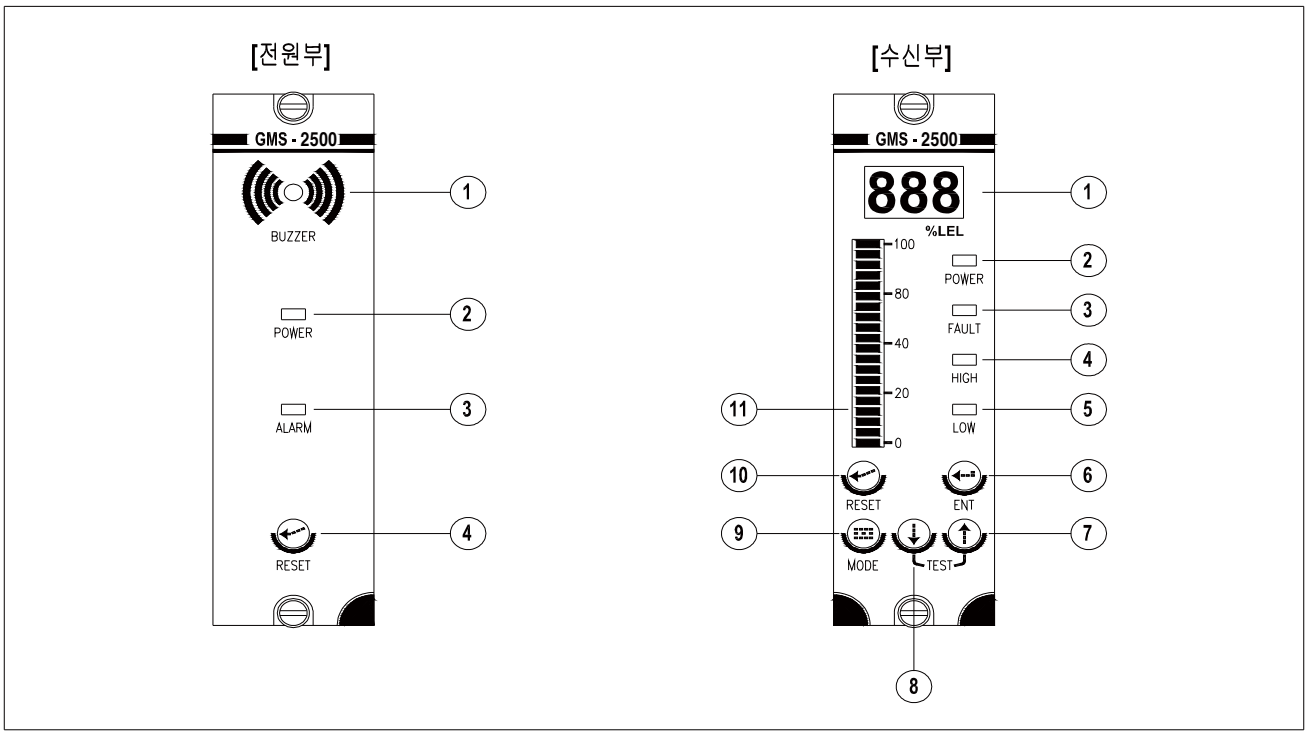
◈High/low relay output for interlocking with external devices such as fan.

◈Robust aluminum alloy casing & frame.

[Specification]

Division	GMS-2500	
	Alarming unit (Power unit)	Receiving unit
Product structure	DIN TYPE	DIN TYPE
Control structure	Alarm:Indicator1:1~64	Indicator: Sensor = 1:1
Expansion structure	Slide Card Type	
Input power	AC 230V, 50/60Hz	
Output power		DC 24V(250㎃)
Input signal		4~20㎃ DC/F.S
Output signal		4~20㎃ DC/F.S, RS-485(Option)
Density indicating		F.N.D Display %LEL(Combustible),% (O_2), PPM(Toxic)
Power indicating	AC 230V, 50/60Hz	
Alarm indicating	AC 230V, 50/60Hz	Low Alarm - LOW LED(RED)
		High Alarm – HIGH LED(RED)
		Trouble Alarm – FAULT LED(YELLOW)
Alarm method	Alarm:Indicator1:1~64	Seeing – Alarm LED On/Off
	Alarm:Indicator1:1~64	
Alarm density		HIGH/LOW 2 step Alarm density –set by user
Alarm delay time		0~99seconds, setting by user
Alarm lifting	Manual and automatic returning	
Alarm output	SPDT RELAY output for HIGH/LOW 2 steps SPDT RELAY output for FALULT alarm	
Operating temp./humidity	0℃ ~ 40℃, 80%RH(Non-Condensing)	
Exterior structure	Alarm:Indicator1:1~64	
Output option	Alarm:Indicator1:1~64	

[Keys & LEDs]



▣ Power unit(Alarming unit)

① Buzz: When alarming, buzz sound of more than 80㏈ is given.

② POWER LED: indicates main power supplying condition.(Normal-ON, Power failure-OFF)

③ ALARM LED: By blinking when alarming, alarm is visually indicated

④ RESET: After alarm is recognized, alarming sound is stopped. At this time, ALARM LED is continuously blinking.

▣ Receiving unit(Indicator)

① FND: Received density signal is indicated by digital.(3 digit number)

② POWER LED: Power supplying condition of INDICATOR is shown.(Normal-ON, Power failure-OFF)

③ FAULT LED : It blinks when the line is cut between INDICATOR and DETECTOR.

④ HIGH ALARM LED: It blinks when the density more than setting of HIGH ALARM is detected.

⑤ LOW ALARM LED: It blinks when the density more than setting of LOW ALARM is detected.

⑥ ENT KEY: Push it when the input value is stored at the time Program menu is set.

⑦ UP KEY: When Program menu is set, the increased value is made by the key.

⑧ DOWUN KEY: When Program menu is set, the decreased value is made by the key.

⑨ MODE KEY: Program menu setting mode is selected.

⑩ RESET: alarming of the INDICTOR is manually returned.(When alarming manual release function at menu is selected).

⑪ BAR graph : Received detect density equally divided by 20 is indicated by a bar graph.

[Menus]

Menu	Explanation
d.Po	Position of Decimal point of digital density indication is decided.(Ex. 20.0ppm or, 200ppm)
L.sc	4㎃ setting menu compared to Full Scale.
H.sc	20㎃ setting menu compared to Full Scale.
L.AL	LOW alarming value setting menu.
L.dt	LOW alarming delaying time setting menu.(0~99 seconds)
H.AL	HIGH alarming value setting menu.
H.dt	HIGH alarming delaying time setting menu (0~99 seconds).
S.dt	When initial power is supplied, system initiating time (0~99seconds)
A.rE	Alarm clearing function selection menu - Manual/Auto clearing selection
	※ 1 – Auto clearing setting menu
	※ 0 – Manual clearing setting menu

[Alarm Test]

※ TEST : Alarm operating or nor is tested

* Setting method: Push (UP) and (DOWN) continuously and simultaneously.

During pushing 2 buttons continuously, the value is continuously increasing, when it arrives at the peak within the detectable range, it stops.

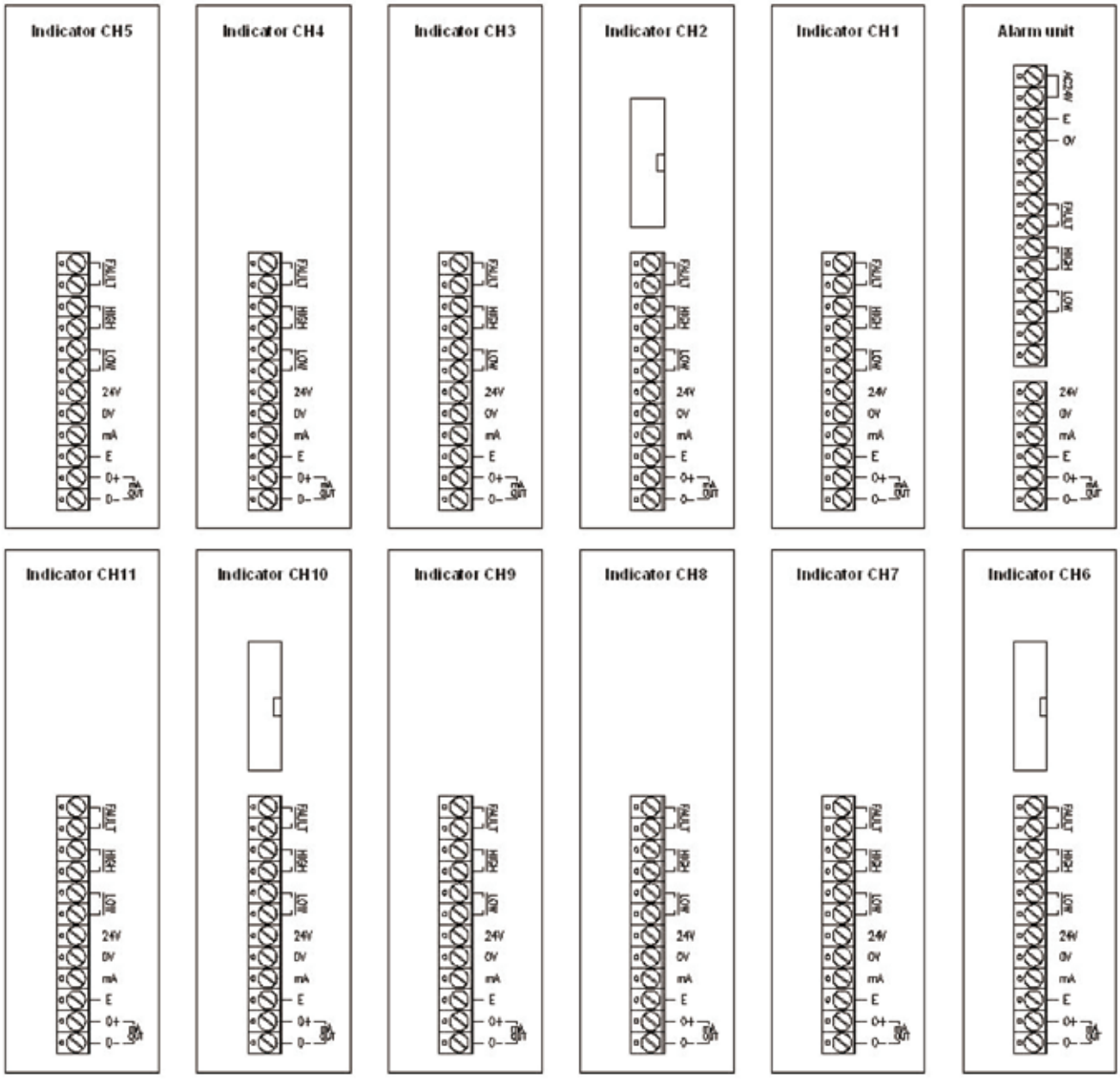
When the value passes through the set value, LOW and HIGH alarm automatically sounds.

[Programming]

Order	Menu	Selection/Pass	Setting of menu value	Storing button
1) If entering into the menu setting mode by pushing (MODE)Key, the first menu(d.Po) appears, and if pushing (MODE)Key repeatedly, following menu appears in order, FND number on the left side blinks continuously to show the setting status. 2) At this time, Selection/Pass is determined by (ENT)/(DOWN)Key.				
1	**d.Po**	(ENT)/(MODE)	Position of decimal point is determined with (UP) or (DOWN) Key	(ENT)
2	**L.sc**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
4	**H.sc**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
5	**L.AL**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
6	**L.dt**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
7	**H.AL**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
8	**H.dt**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
9	**S.dt**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
10	**A.rE**	(ENT)/(MODE)	Value is set with (UP) or (Down) Key.	(ENT)
11	**End**	If all the above menus are passed in order, they will be automatically transferred into common mode.		
※ If the precedent menu is moved to the next menu without setting value, push the (MODE) Key.				
※ If one menu value is set and stored, it will be automatically transferred into common mode. (1 menu selection/menu setting mode 1 time)				
※ EX) L-AL setting: 1) If (MODE) Key is pushed 4 times repeatedly, L.AL menu appears. 2) Value is set with (UP) or (Down) Key. 3) If (ENT) Key is pushed, value is stored and automatically transferred into common mode.				

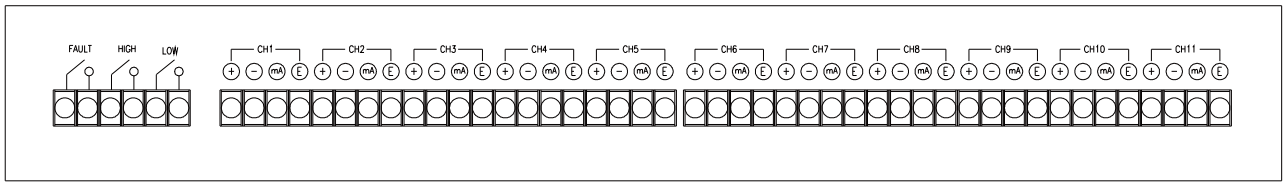
[Wiring] monitoring unit

<Channel terminal>



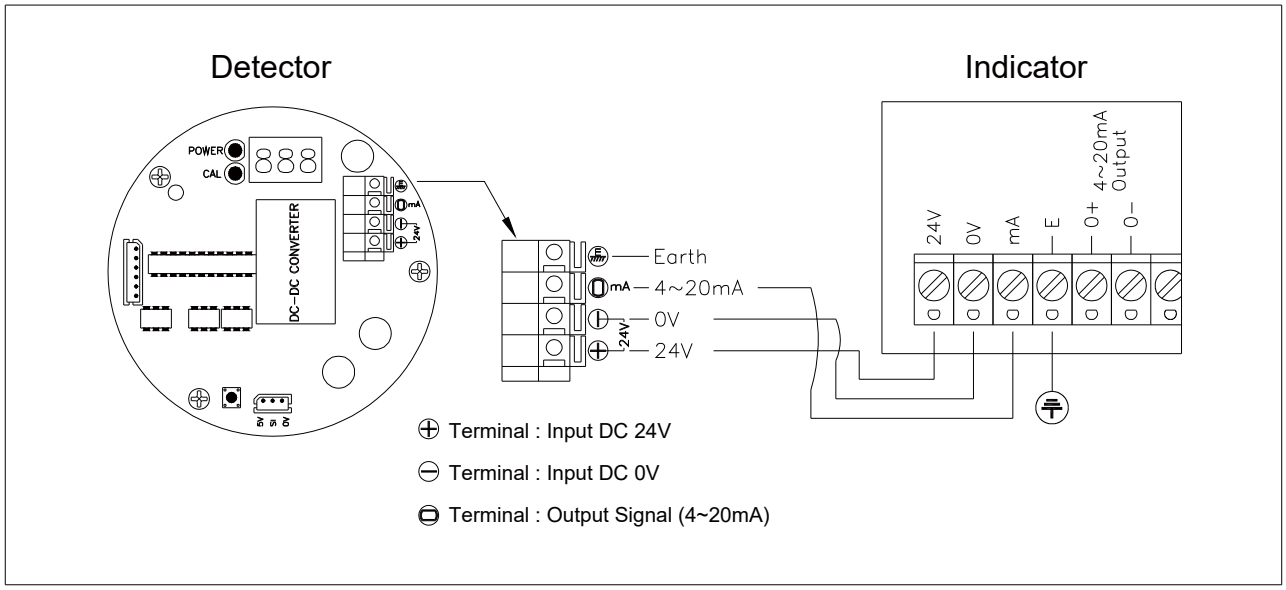
Note: Every channel has two terminals each of FAULT, HIGH, & LOW.

<External terminal>



Note: 24V(+), GND(-), analogue output(Ma), earth(E)

[Wiring] Gas detector ⟷ Receiving unit



[Dimensions]