WISE®

WISE Sensing Inc.

THE BEST SOLUTION

Gas Detection System

www.wisesensing.com

Providing a safe and a high quality
living environment
To our customer is our next mission!

Gas Detection System

Be Safe
Be Economic
Choose WISE Sensing Inc.

HELPING TO CREATE A SAFE AND A CLEAN ENVIRONMENT
BY THE STATE OF THE ART TECHNOLOGIES

WISE Sensing Inc. is an industry leader in detecting the potential dangers from
Combustible and Toxic gases that pose a threat people and property.
We response to demands for safe and environment by developing and manufacturing quality
Detection instruments with advanced performance and reliability.

GD-1010
Combustible gas detector

GT-1010
Transmitter type
combustible gas detector

GX-1010
Transmitter type toxic,
oxygen gas detector

GT-1100
Local display & transmitter type
combustible gas detector

GX-1100
Local display & transmitter type combustible
(IR sensor), toxic, oxygen gas detector

GT-1100S
Suction & local display type
combustible gas detector

GX-1100S
Suction & local display type combustible
(IR sensor), toxic, oxygen gas detector

AM-2000
Common alarm unit

GM-1000
Bar graph type indicator

MC-2100 Series
Multi unit case

SM-1000
One-point gas indicator & alarm unit

The basic component of the detector is the pelistor type sensor, based on the principle of catalytic oxidation
Sensor detects all combustible gases, and are designed to meet explosive proof specification Ex d IIB+H2 T6
We can easily change the sensor unit by opening front cover (plug-in type)

FEATURES

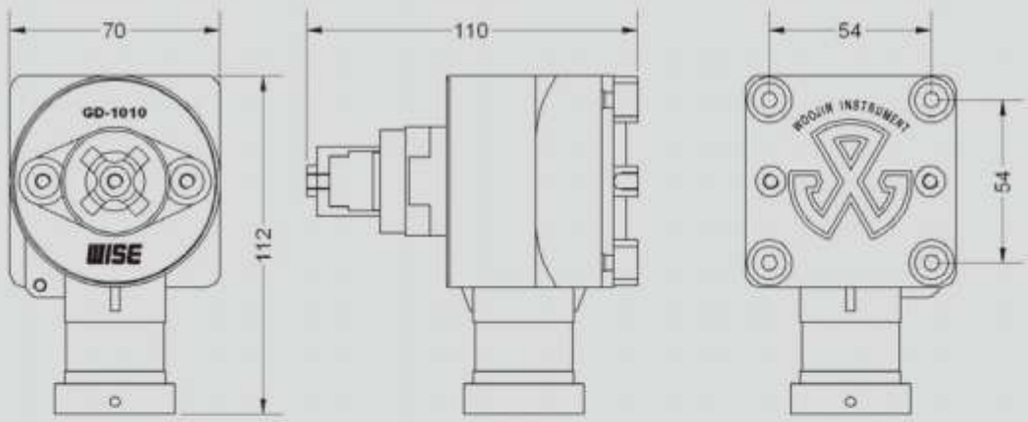
- Easy maintenance plug-in sensor
- Suitable for use in a wide variety of gas detection application
- Explosion proof housing (Ex d IIB + H2 T6)
- Compact & easy mounting
- Fast response
- Long term stability

GD-1010

Combustible gas detector

- Economical choice
- Explosion proof
- Fast response
- Compact size
- Plug-in sensor

Measuring gas	Combustible gas
Measuring range	0 to 100% LEL
Detection principle	Catalytic combustion
Sampling	Diffusion
Heating current	295mA
Output signal	mV signal
Explosion proof	Ex d IIB + H2 T6
Detector housing	Aluminum diecasting
Sensor housing	SUS 316
Dimension	70(W)×112(H)×110(D)
Cable	3 or 4 wire shielded
Response time [1]	Less than 15 sec at T90 [2]
Zero / span drift	+ / -3%
Expected sensor life time	36 to 60 month
Operating temp. / humi.	-20℃ to 50℃ / up to 95% R.H



Accessories

Collecting cone

Calibration gas

Adaptor

Mounting bracket
with weather proof cover

1) Flammable Gases : Less Than 12 Seconds at T60(KOSHA P-135-2013)
2) T90 is the time it takes to display a 90% LEL of the target gas
T60 is the time it takes to display a 60% LEL of the target gas

GT-1010 series is a gas leak transmitter with microprocessor application circuit.
Sensors housing are made of 316 stainless steel, tough and resistance to corrosive agents. Pre-calibrated sensors can be disconnected by turning the head of the unit. the sensors, which are equipped with a printed circuit, can be calibrated outside hazardous areas on a bench. the microprocessor in the PCB provides a linear 4 to 20mA signal, which corresponds to measuring of gas.
Calibratiom and sensor sensitivity check can be performed by one man using a standard digital voltmeter.

FEATURES

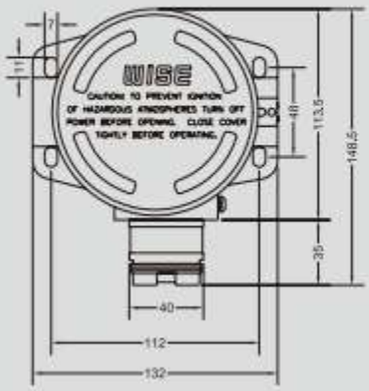
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers.
- Suitable for use in a wide variety of gas detection applications.
- Explosion proof housing (Ex d IIC T6 IP65)
- Two conduit port are offered with 1/2″or 3/4″ NPT(PF)
- Fast response
- Applied the state of the art technology provides excellent stability

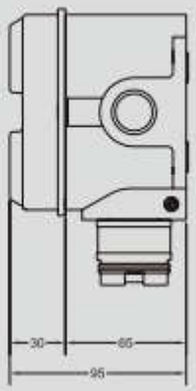
GT-1010

Transmitter type combustible gas detector

- One man calibration
- Explosion proof
- Fast response

Model	GT-1010
Measuring gas	Combustible gas
Measuring range	0 to 100% LEL
Detection principle	Catalytic combustion
Display	None
Sampling	Diffusion
Power	18 to 30V DC
Power consumption	2.4W (100mA)
Output signal	DC 4 to 20mA
Load impedance	600Ω
Local calibration	Yes
Explosion proof	Ex d IIC T6 IP65 (KOSHA)
Detector housing	Aluminum diecasting
Sensor housing	SUS 316
Dimension	132(W)×148.5(H)×95(D)
Cable	3 Wire shielded
Response time[1)]	Less than 15 secs at T90[2)]
Zero / span drift	+ / -3%
Expected sensor life time	36 to 60 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H





Accessories

Collecting cone

Calibration gas

Adaptor & Splash guard

Mounting bracket
with weather proof cover

1) Flammable Gases : Less Than 12 Seconds at T60(KOSHA P-135-2013)
2) T90 is the time it takes to display a 90% LEL of the target gas
T60 is the time it takes to display a 60% LEL of the target gas

GX-1010 series is a digital toxic & oxygen gases leak transmitter with microprocessor application circuit. Smart sensors are made of 316 stainless steel, robust and resistance to corrosive agents. Pre-calibrated sensors can be disconnected by turning the head of the unit. The sensors, which are equipped with a printed circuit, can be calibrated outside hazardous areas on a bench. The microprocessor in the PCB provides a linear 4 to 20mA signal, which corresponds to measuring range of gas.
Calibration and sensor sensitivity check can be performed by one man using a standard digital voltmeter.

FEATURES

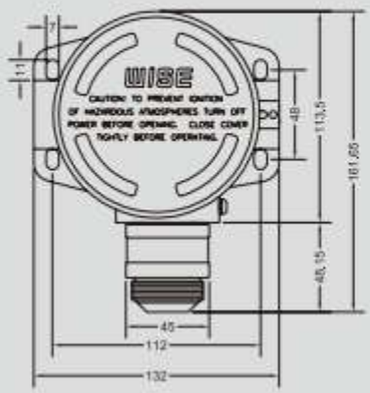
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers.
- Suitable for use in a wide variety of gas detection applications.
- Explosion proof housing (Ex d IIC T6 IP65)
- Two conduit port are offered with 1/2″or 3/4″ NPT(PF)
- Fast response
- Applied the state of the art technology provides excellent stability

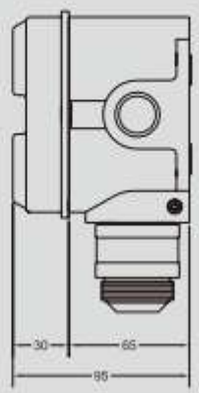
GX-1010

Transmitter type toxic, oxygen gas detector

- One man calibration
- Explosion proof
- Wide variety of the sensor

Model	GX-1010 (ELC)	GX-1010 (O2)
Measuring gas	Toxic gases	Oxygen gas
Measuring range	ppm	0~25% Vol
Detection principle	Electro chemical	Galvanic cell
Display	None	None
Sampling	Diffusion	Diffusion
Power	18 to 30V DC	18 to 30V DC
Power consumption	0.5W (20mA)	0.5W (20mA)
Output signal	DC 4 to 20mA	DC 4 to 20mA
Load impedance	250Ω	250Ω
Local calibration	Yes	Yes
Explosion proof	Ex d IIC T6 IP65 (KOSHA)	Ex d IIC T6 IP65 (KOSHA)
Detector housing	Aluminum diecasting	Aluminum diecasting
Sensor housing	SUS 316	SUS 316
Dimension	132(W)×161.65(H)×95(D)	132(W)×161.65(H)×95(D)
Cable	2 Wire shielded	2 Wire shielded
Response time	Depending on the sensor	Less than 30 secs at T90[1]
Zero / span drift	+ / -3%	+ / -3%
Expected sensor life time	18 to 24 month	18 to 24 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H





Accessories

Collecting cone

Calibration gas

Adaptor & Splash guard

Mounting bracket
with weather proof cover

1) T90 is the time it takes to display a 90% LEL of the target gas
T60 is the time it takes to display a 60% LEL of the target gas

GT-1100 is a digital combustible gas leak transmitter with microprocessor application circuit and FND display.
So you can use this detector with one indicator and you can monitoring the indication value at local area.
Easy calibration function by magnetic bar.
Self-diagnostic function greatly promote the using this device.
Calibration and sensor sensitivity check can be performed by magnetic bar.

FEATURES

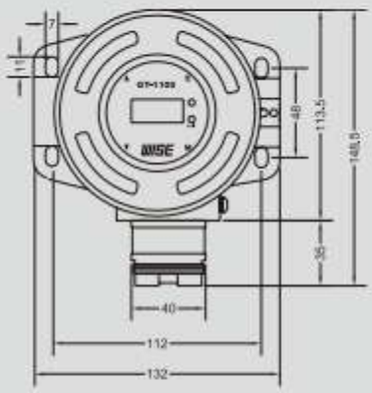
- Local 3 1/2 digit or 4 digit FND display
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers
- Explosion proof housing (Ex d IIC T6 IP65)
- One conduit port are offered with 1/2″or 3/4″ NPT (PF)
- Applied the state of the art technology provides excellent stability

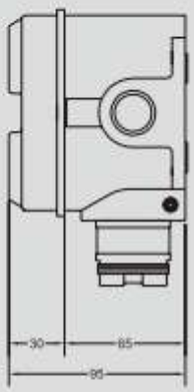
GT-1100

Local display & transmitter type combustible gas detector

- FND digital display
- 4 to 20mA transmission
- Excellent reliability

Model	GT-1100	GT-1100 (HWS)	GT-1100C
Measuring gas	Combustible gas	Toxic gases	Combustible gas
Measuring range	0 to 100% LEL	ppm	0 to 100% LEL
Detection principle	Catalytic combustion	Hot wire semiconductor	Catalytic combustion
Display	3 1/2 digit FND	4 digit FND	4 digit FND
Sampling	Diffusion	Diffusion	Diffusion
Power	18 to 30V DC	18 to 30V DC	18 to 30V DC
Power consumption	3.4W (142mA)	3.4W (142mA)	3.7W (155mA)
Output signal	DC 4 to 20mA	DC 4 to 20mA	DC 4 to 20mA
Load impedance	600Ω	600Ω	600Ω
Local calibration	Yes	Yes	Yes
Explosion proof	Ex d IIC T6 IP65 (KOSHA)	Ex d IIC T6 IP65 (KOSHA)	Ex d IIC T6 IP65 (KOSHA)
Detector housing	Aluminum diecasting	Aluminum diecasting	Aluminum diecasting
Sension housing	SUS 316	SUS 316	SUS 316
Dimension	132(W)×148.5(H)×95(D)	132(W)×148.5(H)×95(D)	132(W)×148.5(H)×95(D)
Cable	3 Wire shielded	3 Wire shielded	3 wire shielded
Response time [1]	Less than 15 secs at T90 [2]	Less than 15 secs at T90 [2]	Less than 15 secs at T90 [2]
Zero / span drift	+ / -3%	+ / -3%	+ / -3%
Expected sensor life time	36 to 60 month	36 to 60 month	36 to 60 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H
Alarm set point			Two independent (H, HH)
Alarm set valve			0 to F.S. programmable
Alarm output			3 X SPDT N.O or N.C (H, HH, Fail)





Accessories


Collecting cone


Calibration gas


Adaptor & Splash guard


Mounting bracket with weather proof cover

Magnetic bar

1) Flammable Gases : Less Than 12 Seconds at T60(KOSHA P-135-2013)
2) T90 is the time it takes to display a 90% LEL of the target gas
T60 is the time it takes to display a 60% LEL of the target gas

GX-1100 is a digital combustible or toxic gas leak transmitter with microprocessor application circuit and FND or LCD display.
So you can use this detector with one indicator and you can monitoring the indication value at local area.
Easy calibration function by magnetic bar.
Self-diagnostic function greatly promote the using this device.
Calibration and sensor sensitivity check can be performed by magnetic bar.

FEATURES

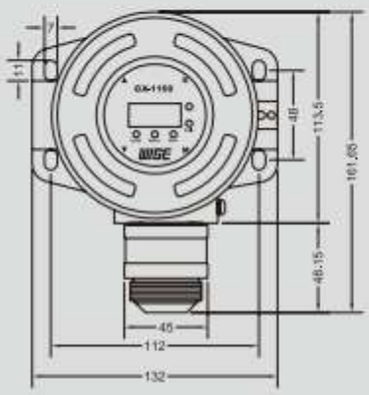
- Local 4 digit FND display
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers
- Explosion proof housing (Ex d IIC T6 IP65)
- Two conduit port are offered with 1/2″or 3/4″ NPT (PF)
- Applied the state of the art technology provides excellent stability

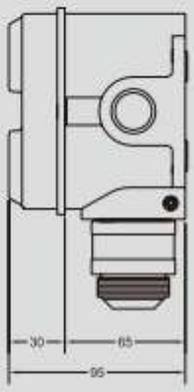
GX-1100

Local display & transmitter type combustible (IR sensor), toxic, oxygen gas detector

- FND digital display
- 4 to 20mA transmission
- Wide variety of the sensor
- Excellent reliability

Model	GX-1100 (IR)	GX-1100 (ELC)	GX-1100 (O2)
Measuring gas	Combustible gas, CO2 gas	Toxic gases	Oxygen gas
Measuring range	0 to 100% LEL, ppm	ppm	0~25% Vol
Detection principle	Infrared	Electro chemical	Galvanic cell
Display	4 digit FND	4 digit FND or LCD	4 digit FND or LCD
Sampling	Diffusion	Diffusion	Diffusion
Power	18 to 30V DC	18 to 30V DC	18 to 30V DC
Power consumption	2.4W (100mA)	1.7W (70mA) or 0.5W (20mA)	2.4W (100mA) or 0.5W (20mA)
Output signal	DC 4 to 20mA	DC 4 to 20mA	DC 4 to 20mA
Load impedance	600Ω	600 or 250Ω	600 or 250Ω
Local calibration	Yes	Yes	Yes
Explosion proof	Ex d IIC T6 IP65 (KOSHA)	Ex d IIC T6 IP65 (KOSHA)	Ex d IIC T6 IP65 (KOSHA)
Detector housing	Aluminum diecasting	Aluminum diecasting	Aluminum diecasting
Sension housing	SUS 316	SUS 316	SUS 316
Dimension	132(W)×161.65(H)×95(D)	132(W)×161.65(H)×95(D)	132(W)×161.65(H)×95(D)
Cable	3 Wire shielded	2 or 3 wire shielded	2 or 3 wire shielded
Response time	Depending on the sensor	Depending on the sensor	Less than 30 secs at T90 [1)]
Zero / span drift	+ / -3%	+ / -3%	+ / -3%
Expected sensor life time	60 month	18 to 24 month	18 to 24 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H
Alarm set point (model name+C)	Two independent (H, HH)	Two independent (H, HH)	Two independent (L, LL)
Alarm set valve (model name+C)	0 to F.S. programmable	0 to F.S. programmable	0 to F.S. programmable
Alarm output (model name+C)	3 X SPDT N.O or N.C (H, HH, Fail)	3 X SPDT N.O or N.C (H, HH, Fail)	3 X SPDT N.O or N.C (L, LL, Fail)





Accessories

Collecting cone

Calibration gas

Adaptor & Splash guard

Mounting bracket with weather proof cover

Magnetic bar

1) T90 is the time it takes to display a 90% LEL of the target gas
T60 is the time it takes to display a 60% LEL of the target gas

GT-1100S is a digital combustible gas leak transmitter with microprocessor application circuit and FND display.
So you can use this detector with one indicator and you can monitoring the indication value at local area.
Easy calibration function by magnetic bar.
Self-diagnostic function greatly promote the using this device.
Calibration and sensor sensitivity check can be performed by magnetic bar.

FEATURES

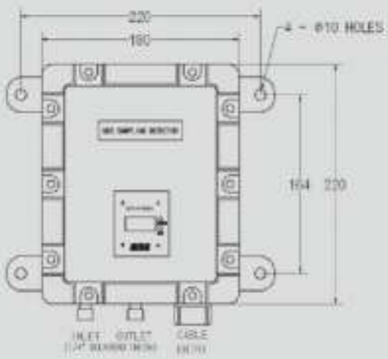
- Local 3 1/2 digit or 4 digit FND display
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers
- Explosion proof housing (Ex d IIB + H2 T6)
- One conduit port are offered with 1/2″or 3/4″ NPT (PF)
- Applied the state of the art technology provides excellent stability

GT-1100S

Suction & local display type combustible gas detector

- FND digital display
- 4 to 20mA transmission
- Excellent reliability
- Suction type(buit-in pump)

Model	GT-1100S	GT-1100CS
Measuring gas	Combustible gas	Combustible gas
Measuring range	0 to 100% LEL	0 to 100% LEL
Detection principle	Catalytic combustion	Catalytic combustion
Display	3 1/2 digit FND	4 digit FND
Sampling	Suction	Suction
Power	18 to 30V DC	18 to 30V DC
Power consumption	8.2W (342mA)	8.5W (355mA)
Output signal	DC 4 to 20mA	DC 4 to 20mA
Load impedance	600Ω	600Ω
Local calibration	Yes	Yes
Explosion proof	Ex d IIB+H2 T6	Ex d IIB+H2 T6
Detector housing	Aluminum diecasting	Aluminum diecasting
Dimension	180(W)×220(H)×110(D)	180(W)×220(H)×110(D)
Cable	3 Wire shielded	3 wire shielded
Zero / span drift	+ / -3%	+ / -3%
Expected sensor life time	36 to 60 month	36 to 60 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H
Pump input	DC 24V (no wiring)	DC 24V (no wiring)
Pump type	Diaphragm	Diaphragm
Pump delivery	1~1.5L or more/minute	1~1.5L or more/minute
Alarm set point		Two independent (H, HH)
Alarm set valve		0 to F.S. programmable
Alarm output		3 X SPDT N.O or N.C (H, HH, Fail)



Accessories

Collecting cone

Calibration gas

Magnetic bar

GX-1100S is a digital combustible or toxic gas leak transmitter with microprocessor application circuit and FND display.
So you can use this detector with one indicator and you can monitoring the indication value at local area.
Easy calibration function by magnetic bar.
Self-diagnostic function greatly promote the using this device.
Calibration and sensor sensitivity check can be performed by magnetic bar.

FEATURES

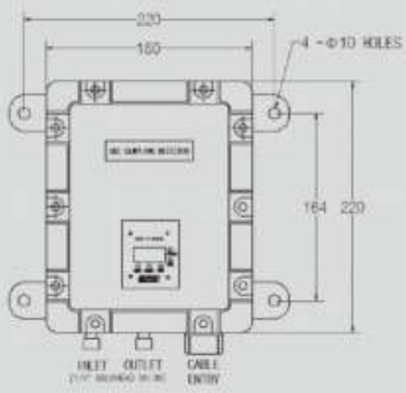
- Local 4 digit FND display
- Easy maintenance and calibration
- Linear DC 4 to 20mA output can be connected to various kinds of receivers
- Explosion proof housing (Ex d IIB + H2 T6)
- One conduit port are offered with 1/2″or 3/4″ NPT (PF)
- Applied the state of the art technology provides excellent stability

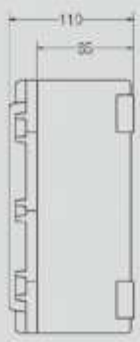
GX-1100S

Suction & local display type combustible (IR sensor), toxic, oxygen gas detector

- FND digital display
- 4 to 20mA transmission
- Wide variety of the sensor
- Excellent reliability
- Suction type(buit-in pump)

Model	GX-1100S (IR)	GX-1100S (ELC)	GX-1100S (O2)
Measuring gas	Combustible gas	Toxic gases	Oxygen gas
Measuring range	0 to 100% LEL	ppm	0~25% Vol
Detection principle	Infrared	Electro chemical	Galvanic cell
Display	4 digit FND	4 digit FND	4 digit FND
Sampling	Suction	Suction	Suction
Power	18 to 30V DC	18 to 30V DC	18 to 30V DC
Power consumption	7.2W (300mA)	6.5W (270mA)	7.2W (300mA)
Output signal	DC 4 to 20mA	DC 4 to 20mA	DC 4 to 20mA
Load impedance	600Ω	600Ω	600Ω
Local calibration	Yes	Yes	Yes
Explosion proof	Ex d IIB+H2 T6	Ex d IIB+H2 T6	Ex d IIB+H2 T6
Detector housing	Aluminum diecasting	Aluminum diecasting	Aluminum diecasting
Dimension	180(W)×220(H)×110(D)	180(W)×220(H)×110(D)	180(W)×220(H)×110(D)
Cable	3 Wire shielded	3 wire shielded	3 wire shielded
Zero / span drift	+ / -3%	+ / -3%	+ / -3%
Expected sensor life time	60 month	18 to 24 month	18 to 24 month
Operating temp. / humi.	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H	-20 to 50 ℃ / up to 95% R.H
Pump input	DC 24V (no wiring)	DC 24V (no wiring)	DC 24V (no wiring)
Pump type	Diapharm	Diapharm	Diapharm
Pump deliery	1~1.5L or more/minute	1~1.5L or more/minute	1~1.5L or more/minute
Alarm set point (model name+C)	Two independent (H, HH)	Two independent (H, HH)	Two independent (L, LL)
Alarm set valve (model name+C)	0 to F.S. programmable	0 to F.S. programmable	0 to F.S. programmable
Alarm output (model name+C)	3 X SPDT N.O or N.C (H, HH, Fail)	3 X SPDT N.O or N.C (H, HH, Fail)	3 X SPDT N.O or N.C (L, LL, Fail)





Accessories

Collecting cone

Calibration gas

Magnetic bar

AM-2000 generates common alarm signal and sound by the signal from individual gas Indicators (GM-1000), and it transfer the alarm recognition state of operator to each individual detector.

FEATURES

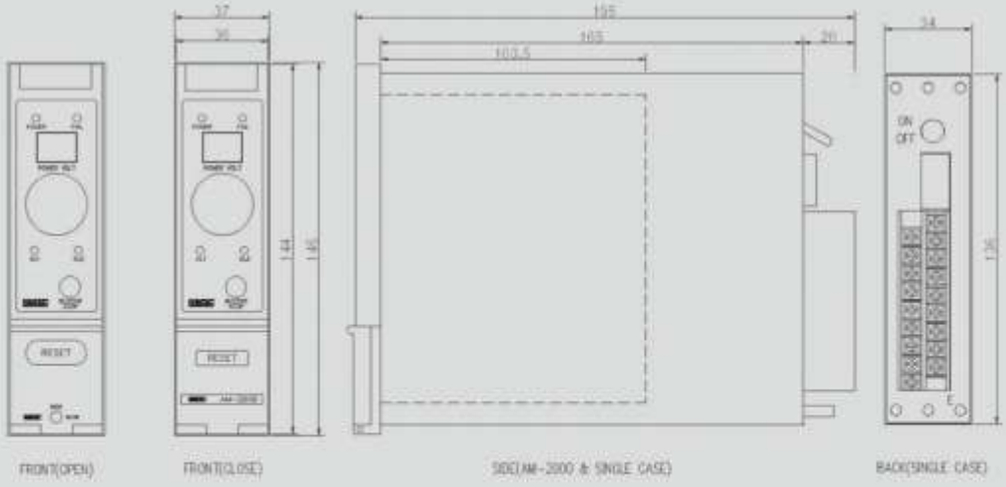
- 10minutes alarm contact output, 2point (1st, 2nd)
- Fail alarm contact output
- External buzzer operation contact output
- Buzzer stop contact input (remote buzzer stop)
- Alarm return contact input (remote alarm acknowledge)
- Buzzer stop function select
- Digital input voltage display

AM-2000

Common alarm unit

- 3 individual alarm relay integrated
- DIN cut-out
- Local or remote alarm acknowledgement
- Easy confirmation for alarm status

Model	AM-2000	
Display	Alarm status display by LED power & fail display	
Buzzer sound	90dB at 1m	
Reset switch	Push cover plate	
Ack. button	Buzzer stop	
Alarm output	AL1, AL2, Fail: 3 X SPDT	Contact capacity: 250V, 10A
Contact input	Alarm stop input: 1 point Alarm reset input: 1 point	Dry contact type
Power	18 to 30V DC	
Power consumption	6W (280mA)	
Mounting	Panel flush mounting	
Dimension	37(W)×145(H)×195(D) (With S/C) 36(W)×144(H)×113.5(D) (Only GM-1000)	
Weight	750g	
Operating temperature	0℃ to 50℃	



GM-1000 is a digital gas leakage indicator with microprocessor application circuit.
It is upgraded to promote (easy reading indication value and alarm state, confidence, easiness of using)
GM-1000 is installed at the place using gases by raw materials, supplying gases or the place can where gas is leaking, like industrial areas, gas charging sites, petrochemical plants, chemical plants, etc. And it can protect industrial calamity by detecting gas leakage and notifying in advance. Also it can be applied to detector of combustible gases (methane, ethane, LPG, LNG, etc.) and toxic gases. It may be used with common alarm unit (AM-2000)

FEATURES

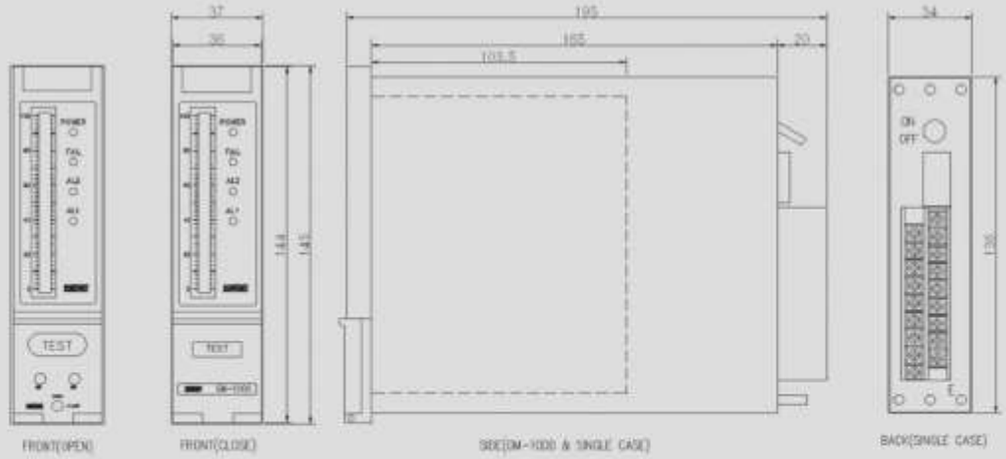
- 3 color changeable bar graph
- Normal: green, 1st AL: yellow, 2nd AL: red
- Self diagnostics functions
- Easy alarm set point adjustment
- It has a microprocessor
- Selectable the kinds of detector by jumper pin
- Linear DC 4 to 20mA output retransmission
- Two alarm levels (high alarm, high-high alarm)
- Plug-in modularity
- Adjust internal settings without power off
- Short circuit protection
- Sensor fail alarm

GM-1000

Bar graph type indicator

- Easy confirmation for alarm status
- Linear DC 4 to 20mA output
- 3 individual alarm relay integeated
- DIN cut-out (easily expansion)

Model	GM-1000	
Display	51 segment bar graphic, power, fail, AL1 and AL2	3 color changeable bar graphic
Sensor input	Selectable	
Measuring range	0~100% LEL or depending on the gas	
Alarm set point	Two (high, high-high)	L, LL available
Alarm set valve	0 to F.S programmable	2% step
Alarm output	AL1, AL2, Fail: 3 X SPDT	Contact capacity: 250V, 10A
Retransmission	DC 4-20mA Linear	Max. 600Ω load impedance
Power	18 to 30V DC	FUSE 1A
Power consumption	4W (180mA)	
Mounting	Panel flush mounting	
Dimension	37(W)×145(H)×195(D) (With S/C) 36(W)×144(H)×113.5(D) (Only GM-1000)	
Weight	670g	
Operating temperature	0℃ to 50℃	



MC-2100 is compact type multi-panel for indicators with DC power supply and terminals.
You can monitor and control the air quality in your environment by MC-2100 series

FEATURES

- Integrated all into a rack and compact designed
- Easy mounting and connecting with detectors
- Applied the Individual power switch for the each Indication card
- Various kinds for 3, 6, 9, 12 and 15 channels available
- Usability various electric power AC110V or 220V, 50/60Hz available

MC-2100 Series

Multi unit case

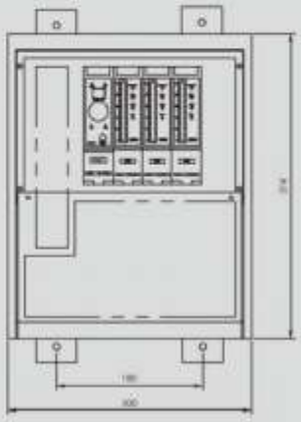
- 3,6,9,12 and 15 channel
- Wall or panel flush mounting
- Easy installation and wiring
- All-in-one system

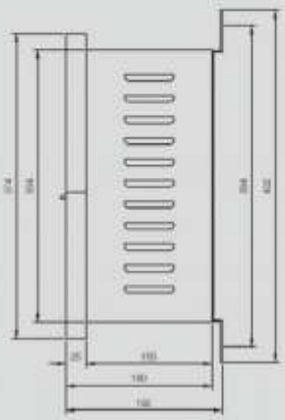
Model	MC-2103	MC-2106	MC-2109	MC-2112	MC-2115
Channel	3 channel	6 channel	9 channel	12 channel	15 channel
Size	Refer to the dimension drawing				
Mounting	Wall or flush mounting				
Power	AC 110V + / -10% or AC 220V + / -10%, 50 / 60Hz				
Main switch	ON/OFF toggle switch				
Main fuse	Replacement glass fuse				
Connection	Front side				
Cable entry	Bottom				
Materials	SPC1.2t				
Color	Munsell no. 5Y 7 / 1				

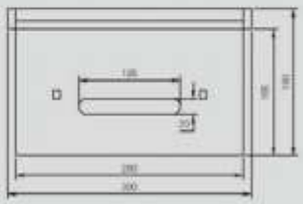
TECHNICAL CHARACTERISTICS

Channel	Width	Height	Depth
3 channel	300 (284)	374 (339)	180 (155)
6 channel	408 (392)	374 (339)	180 (155)
9 channel	516 (500)	374 (339)	180 (155)
12 channel	624 (608)	374 (339)	180 (155)
15 channel	732 (716)	374 (339)	180 (155)

( ) is the cut-out size using for panel flush mounting







SM-1000 is a digital gas leakage indicator with microprocessor application circuit.
SM-1000 produce alarm signal and sound by the signal of 1 point gas detector, and it transfer the alarm recognition state of operator to the detector.
It is upgraded to promote (easy reading indication value and alarm state, confidence)
SM-1000 is installed at the place using gases by raw materials, supplying gases or the place where gas is leaking, like industrial areas, gas charging sites, petrochemical plants, chemical plants, etc. And it can protect industrial calamity by detecting gas leakage and notifying in advance.
Also it can be applied to detector of combustible gases(methane, ethane, LPG, LNG, etc.) and toxic gases.

FEATURES

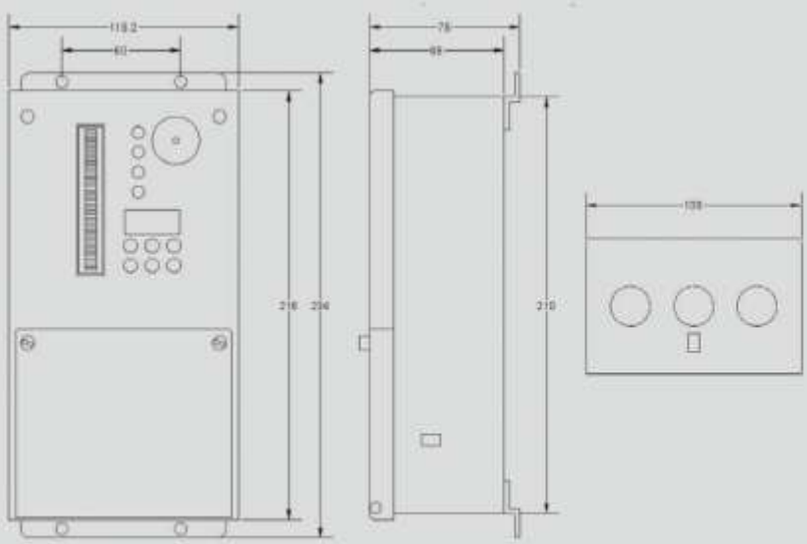
- Alarm contact output, 2point
- Fail alarm contact output
- External buzzer operation contact output
- Buzzer stop contact input
- Alarm return contact input
- Buzzer stop function select
- Digital input voltage display
- 3 color changeable bar graph
- Normal: green, 1st AL: yellow, 2nd AL: red
- Self diagnostics functions
- Easy alarm set point adjustment
- Selectable the kinds of detector by jumper pin
- Linear DC 4 to 20mA output retransmission
- Two alarm levels (high alarm, high-high alarm)
- Adjust internal settings without power off
- Short circuit protection
- Sensor fail alarm

SM-1000

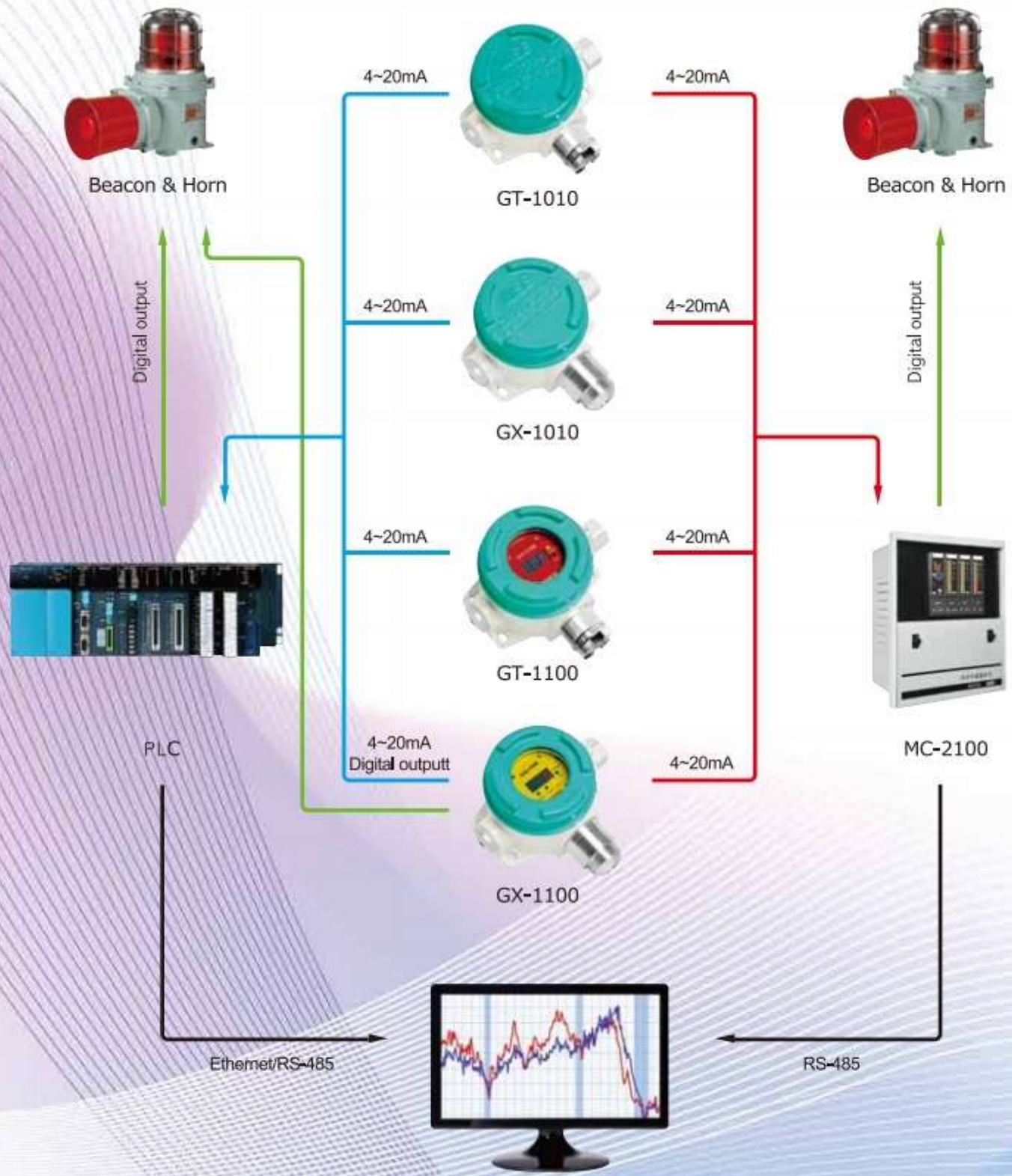
One-point gas indicator & alarm unit

- 3 color changeable LED bar graphic display
- 51 segments, fine resolution
- Self diagnostic functions
- 3 individual alarm relay integrated
- Various detectors to be connected
- Local or remote alarm acknowledgement
- Easy confirmation for alarm status

Model	SM-1000	
Display	51 segment bar graphic, 4 digit FND Power, fail, AL1 and AL2 LED	3 color changeable bar graphic
Sensor input	Selectable	
Measuring range	0~100% LEL or depending on the gas	
Alarm set point	Two (high, high-high)	L, LL available (O2)
Alarm output	AL1, AL2, Fail: 3 X SPDT	Contact capacity: 250V, 10A
Retransmission	DC 40~20mA Linear	Max. 600Ω load impedance
Power	AC 100V~240V 50 / 60Hz, free volt	
Power consumption	220V, 20W (90mA) / 110V, 15W (140mA)	
Dimension	1.2kg	
Weight	116.2(W)×216(H)×68(D)	
Operationg temperatyre	0℃ to 50℃	
Main switch	ON/OFF toggle switch	
Main fuse	Glass fuse 5A	
Installation method	Wall or flush mounting	



SYSTEM CONFIGURATION



DANGER OF COMBUSTIBLE GASES, TOXIC GASES, AND VAPORS

Gas	Chemical formula	Flammable(Explosive) Range (vol%)	Threshold Limit Value (ppm)	Specific Gravity of Gas (air=1)
Acetone	(CH3)2CO	2.2-13	750	2
Acetylene	C2H2	1.5-100	-	0.9
Ammonia	NH3	15.0-28	25	0.59
Arsine	AsH3	5.1-78	0.05	2.7
Benzen	C6H6	1.2-8.0	0.5	2.7
Butane	C4H10	1.5-8.5	-	2.01
Carbon monoxide	CO	12.5-74	30	0.96
Chlorine	CL2	-	1	2.49
Chlorine trifluoride	ClF3	-	0.1	3.2
Diborane	B2H6	0.8-88	0.1	0.96
Ethanol	C2H5OH	3.5-19	1000	1.59
Ethyl Acetate	CH3COOC2H5	2.1-11.5	400	3.04
Ethyl Mercatan	-	-	0.5	2.14
Ethylene	C2H4	2.7-34	-	1
Ethylene Oxide	CH2CH2O	3.0-100	1	1.5
Fluorine	F2	-	0.1	1.312
Gasoline	-	1.4-7.6	300	3.0-4.0
Heptane	C7H16	1-6.7	-	3.5
Hexane	CH3(CH2)4CH3	1.2-7.4	50	2.98
Hydrogen	H2	4.0-75.6	-	0.07
Hydrogen chloride	HCL	-	1	1.268
Hydrogen cyanide	HCN	5.6-40	10	0.941
Hydrogen Fluoride	HF	-	3	0.7
Hydrogen Sulfide	H2S	4.3-45.5	10	1.2
Isopropyl alcohol	C3H8O	2.0-12	400	2.07
Methane	CH4	5.0-15.0	-	0.55
Methanol	CH3OH	5.5-44	200	1.1
Methy ethyl ketone	CH3COC2H5	1.4-11.4	200	2.5
Methyl chloride	CH3CL	8.1-17.4	50	1.8
MMA	C5H8O2	1.7-8.2	100	3.6
Nitrogen dioxide	NO2	-	3	1.58
Nitrogen oxide	NO	-	25	1.3402
NMP	C5H9NO	1.3-9.5	10	3.4
Octane	C8H18	1-6.5	-	3.94
Ozone	O3	-	0.05	1.6
Pentane	C5H12	1.4-7.8	600	2.48
Phenol	C6H6O	1.36-10	5	1.0576
Phosgene	COCL2	-	0.1	3.48
Phosphine	PH3	1.6-95	0.3	1.2
Propane	C3H8	2.1-9.5	-	1.56
Propylene	C3H6	2.0-11.7	-	1.5
Propylene Oxide	C3H6O	2.3-38.5	20	2
Silane	SiH4	0.8-98	5	1.3
Styrene Monomer	C8H8	0.9-6.8	50	3.6
Sulfur dioxide	SO2	-	2	2.26
Thinner	-	1.2-7.5	50	3.3
Toluene	C6H5CH3	1.1-7.1	100	3.14
Vinyl Cloride Monomer(VCM)	C2H3CL	3.6-33.0	1	2.15

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