

G-Finder™ Universal B1

Explosion-proof Universal **Multi-gas Detector**

PRODUCT CATALOG



GASTRON

Explosion-proof Universal Multi-gas Detector

G-Finder™ Universal B1

The **G-Finder Universal B1 (GFU-B1)** is an explosion-proof universal multi-gas detector optimized for various industrial environments.

It allows flexible configuration of up to three different types of sensors, enabling precise control tailored to specific site conditions.

This model simplifies complex systems and maximizes maintenance efficiency and field usability.



► Key Features



Multi-gas Detection Structure

- Single / Multi-channel configurable
- Channel-specific alarm settings are possible
- Multi-channel display structure
- Maximizes installation space and maintenance efficiency



Supports 400 Types of Gases

- Various sensors applicable
-> catalytic / electrochemical / infrared
- Equipped with high-reliability SIL2-based self-diagnostic system
- Easily adapt to changes in target gases by simply replacing the sensor



Explosion-proof Ratings by Type

- Holds explosion-proof certifications such as KCs, IECEx, ATEX
- Explosion protection applies even to Insert and Remote type configurations
- Smart sensor with intrinsically safe explosion-proof structure
- Explosion-proof buzzer and HART port applied



Bluetooth Application

- Wireless diagnosis based on Bluetooth
- Real-time data monitoring
- Event log analysis possible
- Reduced work time

Multi Detection System

Multi Sensor Configuration



<Transmitter>



The **GFU-B1** can support up to three types of sensors simultaneously. By connecting catalytic, electrochemical, and infrared sensors to the transmitter, the system provides enhanced scalability and flexibility to detect various gases in hazardous areas. It performs versatile detection roles based on site-specific requirements.

Product Configuration Examples



Single Type



Dual Type



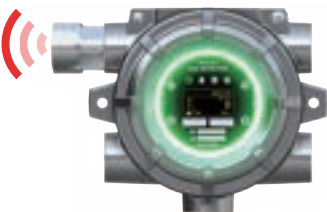
Triple Type



Remote Dual Type

High Visibility and Warning Sounds

Light ring & Buzzer



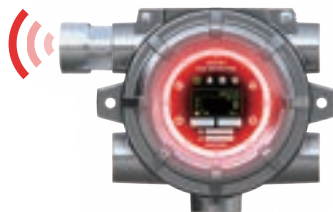
Green

Normal Operating Status



Yellow

Fault Warning

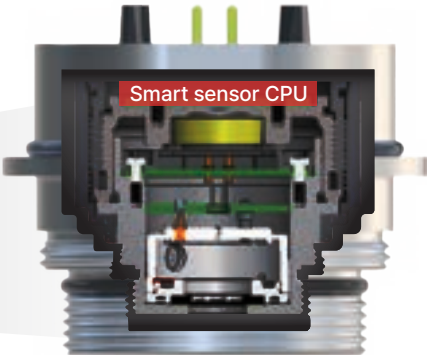


Red

Alarm Warning

The status of the device is clearly indicated by the color of the light ring, **making it easily recognizable in both bright and dark working environments**. Even when it is not visually noticed, the internal buzzer emits an audible alarm of up to 107 dB, effectively stimulating the auditory sense and enabling a quick and appropriate response to hazardous situations.

Smart Sensor



<Cutaway View of Smart Sensor>

► What is a Smart Sensor?

The **smart sensor** is the core technology of the GFU-B1. Its built-in high-performance CPU collects, processes, analyzes, and diagnoses gas measurement signals in real time, and transmits the data to the transmitter. By functioning as a detector itself, the sensor enables a multi-sensing structure, enhancing both detection speed and accuracy.

► Explosion-proof Plug-in Type Sensor

Intrinsically Safe Structure Ex db ia IIC T6/T5/T4 Gb

The **GFU-B1**'s electrochemical sensor is designed with an intrinsically safe structure that allows for instant replacement even in hazardous areas.

Thanks to its plug-in configuration, sensors can be replaced quickly and accurately without any tools — even by non-experts.

► Features of the Smart Sensor

Easy Module Replacement	Quick and simple sensor replacement reduces maintenance time in the field.
Auto Recognition & Calibration	Automatically recognizes sensor type and calibration data during installation.
High Accuracy & Reliability	Operates accurately even in various environments with built-in temperature compensation and self-diagnostic functions.
History & Data Storage	Stores sensor ID and calibration information to improve traceability and reliability.
Signal Diagnosis Function	Evaluates signal reliability in real time by processing gas signals. Handles signals related to power, temperature, communication, and circuit status signals.
Excellent Site Applicability	Supports remote sensor installation up to 100 meters for use in various environments.

Bluetooth Application Connectivity



► Real-time Monitoring

- Search function for the list of connected gas detectors available
- Provides real-time data : gas concentration, status and alarms

► Event Log Tracking

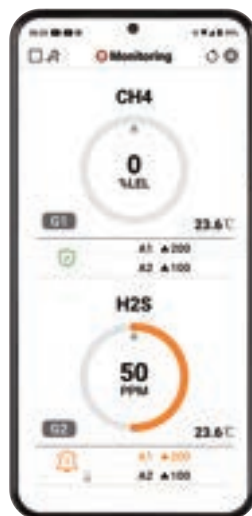
- Provides event logs through data collection
- Allows checking of gas trends

► Calibration and Test Functions

- Enables convenient on-site calibration and inspection via wireless connection
- Improves maintenance efficiency

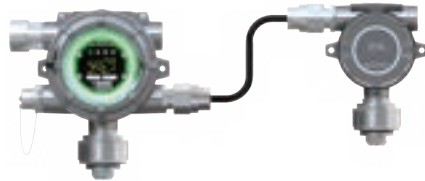


► Bluetooth Application



Explosion-proof Ratings by Type

► Installation Type Variations

		
Proto Type Basic form of the gas detector	Dual Type Configured with two sensors	Remote Type The sensor module is separated from the transmitter
		
Sampling Type The sensor is connected via an external sampling adapter	Insert Type The sensor is inserted into confined or specific spaces	Remote Dual Type Configured with two sensors: one is installed on the transmitter, while the other is located remotely

► Explosion-proof Buzzer



Emits a 107 dB alarm in the event of a gas leak, providing a clear and immediate warning to nearby personnel.

Model | GTL-150 (Option)

► Explosion-proof External HART Port



The external HART port with an explosion-proof structure enables communication without needing to open or remove the enclosure.

Model | HART port (Option)

Accessories



01 Buzzer

Emits a 107 dB alarm in the event of a gas leak, clearly alerting nearby personnel of the situation.



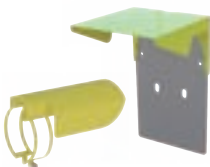
02 HART Port

An external HART port with explosion-proof structure that allows status communication without opening the device.



03 Rain Cover

An accessory that prevents rainwater or dust from entering the device and causing contamination. Made of durable material, providing protection from external impacts.



04 Sunshade

Functions as a protective cover to block direct sunlight, preventing sensor overheating and reducing measurement errors.



05 Dust Cap

Protects the electrochemical sensor from foreign substance. Recommended especially in locations where dust explosion protection is required.



06 Splash Guard

Prevents liquid splashes from reaching the sensor. It is optimally designed for airflow to ensure proper response in the event of a gas leak.



07 Sampling Adapter

This accessory is used to convert a diffusion-type gas detector into a sampling-type detector. It can be attached or detached as needed, allowing flexible configuration to suit the environment.

► Sensor Specification

Measuring method	Catalytic cell	Electrochemical cell	Infrared
Measuring gas	Flammable gas	O2, Toxic gas	Hydrocarbon gas, CO2, CO
Measuring range	0 ~ 100% LEL	0 ~ 25% VOL (O2) 0 ~ 50ppm (H2S) 0 ~ 200ppm (CO) 0 ~ 100ppm (NH3) & etc	0 ~ 100% LEL 0 ~ 5% VOL (CO2) 0 ~ 2% VOL (CO) 0 ~ 4000ppm (N2O)
Response time(T90)	< 15 sec	< 15 sec (O2), < 45 sec (Tx)	< 6 sec
Material	Stainless steel 316	Stainless steel 316	Stainless steel 316
Dimensions / Weight	65(W) x 65(H) x 63(D) mm / ≤ 0.7kg	65(W) x 65(H) x 87(D) mm / ≤ 1.0kg	69(W) x 69(H) x 122(D) mm / ≤ 1.0kg

► Product Specification

Measuring type	Diffusion type
Accuracy	±3% / Full scale
Smart sensor configuration	Diffusion (Basic), Insert, Suction type Up to 3 Smart sensors can be configured Remote sensor max 100m (With Junction box)
Parameter control	Non-intrusive control with a Magnet bar and Bluetooth wireless communication (Calibration, Maintenance, Alarm setting)
Operation mode display	Alarm light ring (Green, Yellow, Red) Power, Alarm, Mode and Fault LED
Measuring value display	1.54" Graphic OLED display (Gas concentration, Gas name, Gas trend, Fault etc.)
Alarm signal output (Option)	6A @ 30VDC, 6A @ 250VAC (Resistive load) 3-SPDT Relay contact (2 Stage alarm, 1 Trouble)
Output signal	Analog : Single 4 ~ 20mA or Dual 4 ~ 20mA (Option), Current source or Sink Digital : Isolated RS-485 Modbus (Option), HART (Option), Note) Triple sensor setup is supported only for digital
Operating power	24VDC normal, 18 to 31VDC
Material	Aluminium alloy or Stainless steel
Cable entry thread	Standard : PF 3/4" (Domestic), M20 x 1.5P (Overseas) M25 x 1.5P, NPT 1/2", NPT 3/4", PF 1/2"
Operating temperature	-40°C ~ 80°C
Operating humidity	0 ~ 99% RH (Non condensing)
Additional interface	Bluetooth, MicroSD Card and Internal HART Port & External I.S. HART Port (Option)
Fault check	Supply voltage / Current, Memory check, Sensor status / Configuration check, System check
Dimensions	148(W) x 147(H) x 114(D) mm (Aluminium alloy) / 148(W) x 147(H) x 110(D) mm (Stainless steel)
Weight	≤ 1.9kg (Aluminium alloy) ≤ 3.5kg (Stainless steel)

► Product Certification

Explosion-proof certification	KCs	Korean Explosion Proof Certification	Ex db ia [ia Ga] IIC T6,T5,T4 Gb / Ex db IIC T6,T5,T4 Gb Ex db ia IIC T6,T5, T4 Gb / Ex tb IIIC T80°C/ T90°C/ T100°C Db
	NEPSI	Chinese Explosion Proof Certification	
	ATEX	European Explosion Proof Certification	
	IECEX	International Explosion Proof Certification	
Other certifications	SIL2	Safety Integrity Certification	IEC61508, EN50402, EN50271
	CE(EMC)	European Electromagnetic Certification	EN50270, EN30032
	KC	Korean Electromagnetic Certification	-
	HART	Communication Protocol Certification	
	CE(RoHS)	European Hazardous Substances Certification	
	CE(RED)	European Radio Equipment Certification	EN 300 328, EN 301 489-1, EN 301-489-17, EN 62479, EN 61010-1