GASTRON
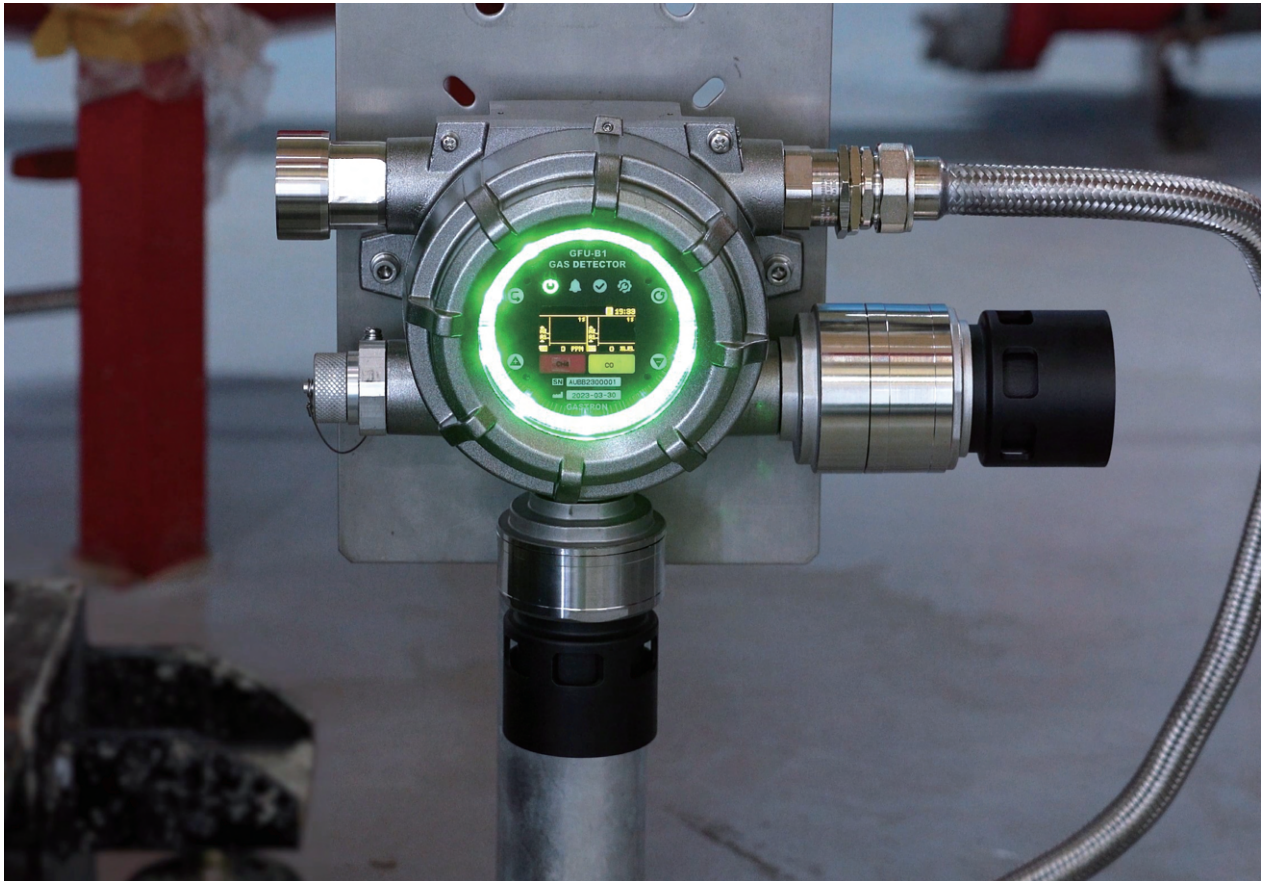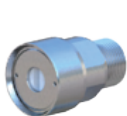
Explosion-Proof Universal Gas Detector
G-Finder™ Universal B1

Features

- Detects 1 to 2 channels of target gases, including flammable, toxic gases, and oxygen.
- The first explosion-proof gas detector in South Korea that can simultaneously mount more than two types of sensors.
- Features a universal transmitter structure that is immediately compatible with other types of sensors.
- Includes the first SIL2-based detecting sensitivity diagnostic system in South Korea.
- Equipped with Bluetooth functionality that connects with a smartphone app.
- Includes the first external HART port with intrinsic safety explosion-proof structure in South Korea.
- Enable rapid situation judgement through the Korean first diversified lightning system.

Accessories

| Buzzer | Sun shield | Dust cap | Splash guard | Flow adapter | Calibration cap |

Sensor Specification

Measuring method	Catalytic cell	Electrochemical cell	2Beam / 4Beam IR
Measuring gas	Flammable gas	O2, Toxic gas	Hydrocarbon gas, CO2, CO, N2O
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 ~ 1% VOL (CO2), 0 ~ 4000ppm (N2O)
Response time(T90)	< 15 sec	O2: < 10 sec, Tx: < 45 sec	< 6 sec
Power Consumption	2.7W / 100mA@+24 VDC (18~31V)	0.3W / 12mA@+24 VDC (18~31V)	4.2W / 170mA@+24 VDC (18~31V)
Material	Stainless steel 316	Stainless steel 316	Stainless steel 316
Dimensions / Weight	65(W) x 63.3(H) x 65(D) mm / 0.7kg	65(W) x 87(H) x 65(D) mm / 1.0kg	68.6(W) x 120.7(H) x 68.6(D) mm / 1.0kg

Detector 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 (10 LED Array) | Power, Alarm, Status and Fault LED
Measuring value display	Graphic OLED display (Gas value, Gas name, Gas trend, Fault etc.), Multi language (English, Chinese)
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)
Power	24VDC nominal, 18 to 31VDC | Max 4.8W (200mA @+24 VDC)
Material	Aluminium alloy or Stainless steel
Cable entry thread	M20 x 1.5P (Standard) | M25 x 1.5P, NPT 1/2", NPT 3/4", PF 1/2", PF 3/4"
Operating temperature	-40℃ ~ 80℃
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 (Ram, Flash, Eepoom) check, Sensor status / Configuration check, System check
Dimensions	170(W) x 147(H) x 114(D) mm (Aluminium alloy) / 170(W) x 145(H) x 110.5(D) mm (Stainless steel)
Weight	1.9kg (Aluminium alloy) | 3.5kg (Stainless steel)

Detector Certification

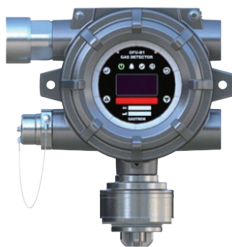|			
Explosion-Proof Certification	KCs	Korean Explosion-Proof Certification	Ex db ia [ia Ga] llC T6,T5,T4 Gb / Ex db llC T6,T5,T4 Gb Ex db ia llC T6,T5, T4 Gb / Ex tb IIIC T80℃/ T90℃/ T100℃ Db
	NEPSI	Chinese Explosion-Proof Certification	Ex db ia [ia Ga] llC T6,T5,T4 Gb / Ex db llC T6,T5,T4 Gb Ex db ia llC T6,T5,T4 Gb / Ex tb IIIC T80℃/ T90℃/ T100℃ Db
	ATEX	European Explosion-Proof Certification	Ex db ia [ia Ga] llC T6,T5,T4 Gb / Ex db llC T6,T5,T4 Gb Ex db ia llC T6,T5,T4 Gb / Ex tb IIIC T80℃/ T90℃/ T100℃ Db
	IECEx	International Explosion-Proof Certification	Ex db ia [ia Ga] llC T6,T5,T4 Gb / Ex db llC T6,T5,T4 Gb Ex db ia llC T6,T5,T4 Gb / Ex tb IIIC T80℃/ T90℃/ T100℃ Db
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	

Product Configuration

■ Transmitter

The GFU-B1 features a universal transmitter structure compatible with various sensors. It allows for immediate compatibility when swapping sensors from contact catalytic bead type to electrochemical or infrared types. Additionally, it can be modified into Insert type or Remote type as needed. Through this technology, the GFU-B1 ensures consistent safety across all sites.
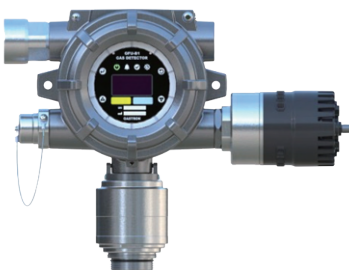
■ Sensor

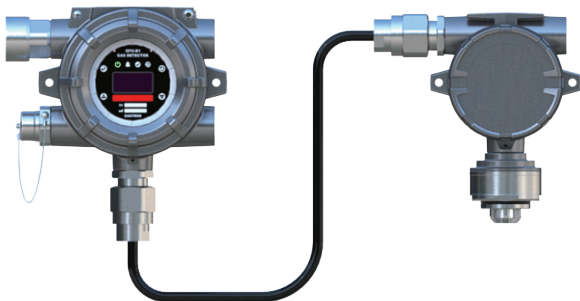| Diffusion Type			Sampling Type Adapter			Insert probe		
Catalytic	Electrochemical	IR(2/4Beam)	Catalytic	Electrochemical	IR(2/4Beam)	Catalytic	Electrochemical	IR(2/4Beam)

Configuration Example

■ Single type

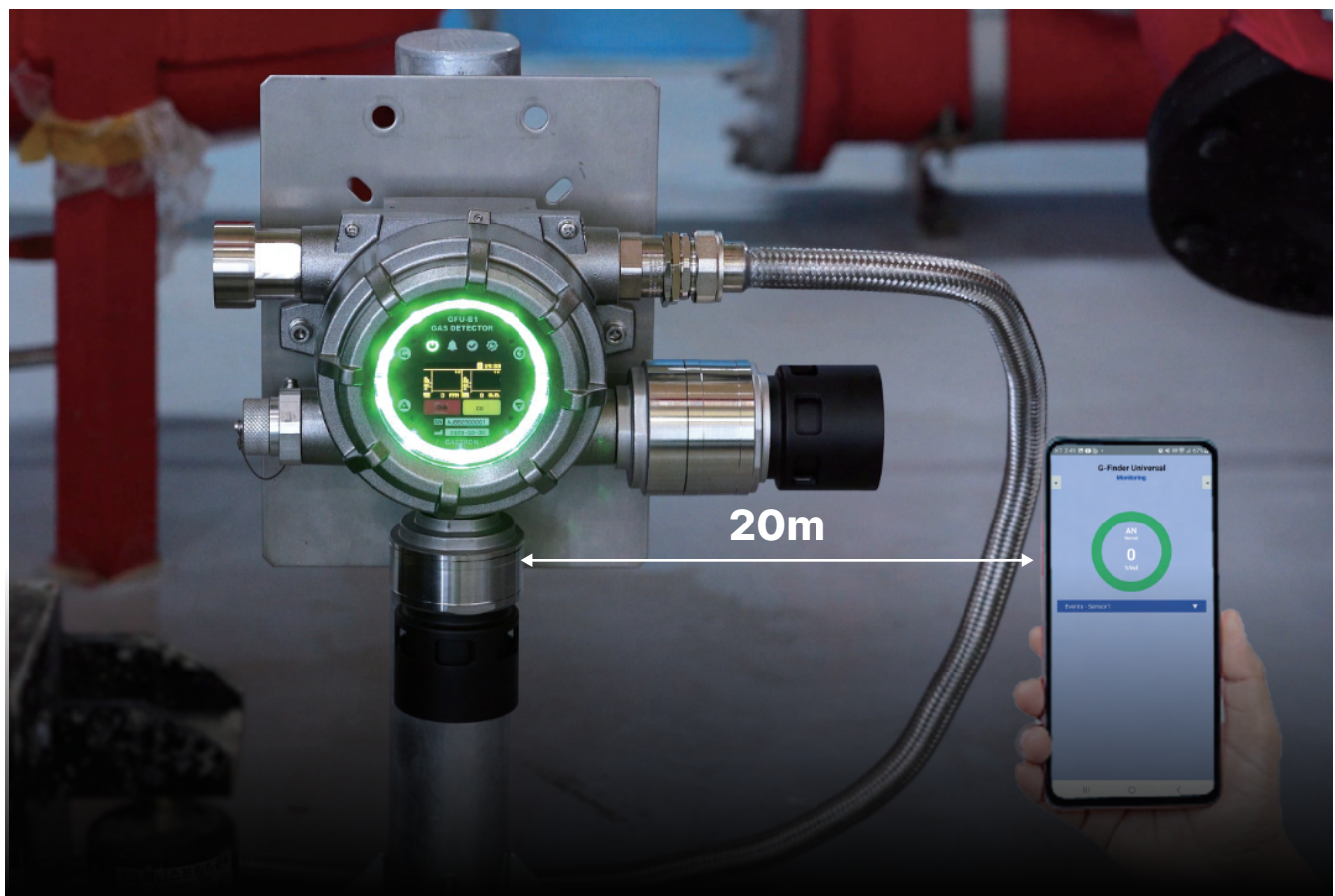■ Dual type

■ Insert probe dual type

■ Remote type
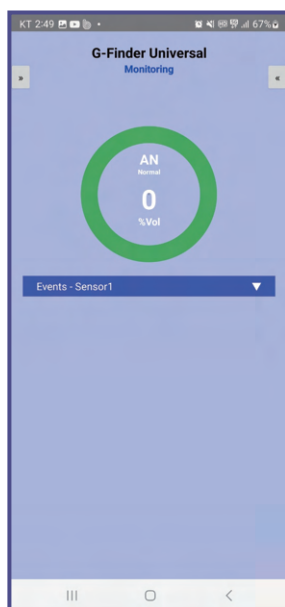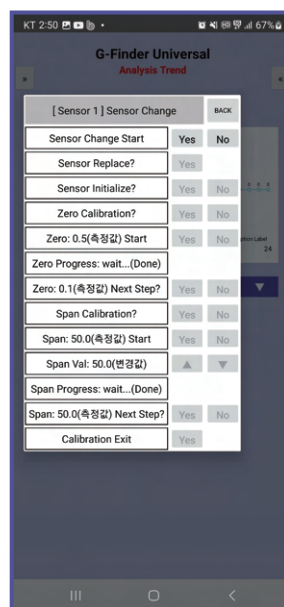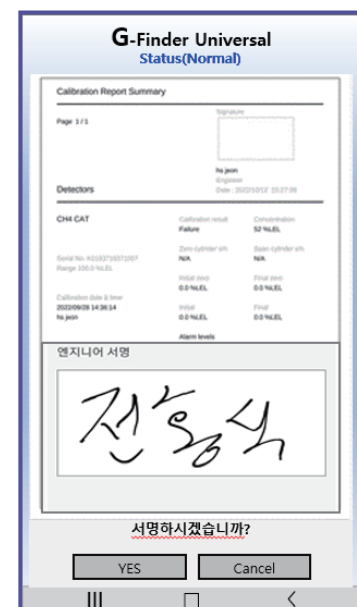
Bluetooth Function

Bluetooth App Main Functions

- Measurement Screen

- Internal menu settings and control functions (calibration, Simulation)

- Reporting function