

PERSONAL COMBUSTIBLE GAS MONITOR

Gas Detection for Life

GP-01 Model



Features

- Pocket size 35 (W) x 105 (H) x 20 (D) mm
- Light Weight (100g)
- Audible/visual/vibration alarm
- Digital readout
- Continuous diffusion monitoring for up to 16 hrs
- Automatic backlight for LCD display
- Ni-Cad battery
- Low battery alarm
- **SAA Certified, Intrinsically safe**

Applications

- Confined Spaces
- Hazardous Material
- Mining
- Refineries/Petrochemical
- Water/Wastewater Treatment
- Pharmaceuticals
- Utilities
- Chemical Plants
- Fire Services

The Model GP-01 is a personal combustible gas monitor and indicator designed to detect the presence of flammable mixtures and indicate the concentration. It can be used intermittently or continuously, and will sound an alarm at two preset levels, typically 10% and 15% LEL. It uses a miniature coin type sensor, and has a liquid crystal digital display (LCD) to show combustible gas concentration directly in percent LEL. The digital display is automatically backlit when used in dark areas.

OPERATING PRINCIPLE

The gas sensor is a coin type cell assembly in a metal enclosure with contact pins. Combustible gas detection occurs at the platinum surface of the active element. Any combustible gases or vapors in the atmosphere are catalytically oxidized at the surface of the heated active element (using oxygen from the air). Heat generated by this oxidation process increases the temperature of the active element, which increases its electrical resistance. A similar but non-catalytic element in the same environment is connected as an adjacent leg of a Wheatstone bridge, and the resistance change produces an electrical output proportional to gas concentration.

The bridge output is amplified in the instrument circuitry to produce a reading in percent LEL and activate alarms if preset levels are exceeded.



RIKEN KEIKI

Measuring Gas	Combustible gas (CH4) or general combustible gas in air
Measuring Range	0 – 100% LEL (1% LEL increments)
Detection Principle	Catalytic combustion method
Sampling Type	Diffusion
Response Time	Within 30 seconds to 90% response (T90)
Indication	Digital on LCD display (7 segments + symbol)
Alarm Points	1st: 10% LEL 2nd: 15% LEL OVER: 100% LEL
Kinds of Alarms	Gas alarm: 2 step alarm (1st and 2nd) and OVER alarm Trouble alarm: Sensor disconnection, low battery, circuit failure, calibration range error
Operating Temp & Humidity	Temperature: 50°C Humidity: Below 90% RH (non-condensing)
Power Source	Exclusive Ni-Cad battery (2.4 VDC) OR two (2) Energizer AAA size EN92 batteries. <i>Battery must be charged outside the apparatus</i>
Continuous Operating Time	Ni-Cad battery: 8 hours (at 25°C and fully charged, no illumination)
Structure:	Intrinsically safe, flame proof for sensor, equivalent to Ex is s Zone 0 II BT3, AUS Ex04.3952X
Functions:	Manual backlight for LCD (Automatically lit during alarm) Peak Hold Direct charging
Standard Accessories	Belt clip Wrist strap
Optional Accessories	Charger unit Calibration cap (adapter) Ni-Cad battery pack
Outer dimensions	Approx 35 (W) x 105 (H) x 20 (D) mm Approx 100g (excluding belt clip)
Certification	SAA Certified, Ex is s Zone 0 II BT3, AUS Ex04.3952X
Warranty	Two (2) years material and workmanship

Specifications subject to change without notice

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