

# Includes 25 Programmed Target Gases

# Portable combustible gas detector

## Model GP-1000

(Manufactured in Japan)

Target gas Select function

Methane, Iso-Butane, Hydrogen, Toluene, Xylene, Alcohol etc.  
25 different target gases can be selected for direct readout



### Target gas is selectable

Direct reading is selectable  
from a list of 25 gases.  
Calibration to only 1 gas (CH<sub>4</sub>) is needed.

### Pump booster function

Pump speed selectable from  
0.3ml/min to 0.6ml/min.  
Gas can be sampled faster or from  
longer distance with higher pump rate.

### Intrinsically safe

Safety rating ExiaIICT4 allows  
users to detect a gas at Zone 0 hazardous area  
where explosion hazards always exists.

### Ingress protection rating IP67

Water proof, Dust proof construction for  
outdoor use meets IP67 rating.

### Filters (optional) can be used with standard gas sampling probe

H<sub>2</sub>S removal filter, silicone removal filter can be installed in standard gas  
sampling probe. Hydrogen sulfide or silicone that would damage sensor  
in GP-1000 can be removed by these filters.

## Specification

|                            |                                                                                                                                                                                                                                                       |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                      | GP-1000                                                                                                                                                                                                                                               |
| Gas detected               | Combustible gas (CH <sub>4</sub> , HC etc. Refer to the gas list)                                                                                                                                                                                     |
| Sensor principle           | Catalytic combustion                                                                                                                                                                                                                                  |
| Detection range            | 0 ~ 100%LEL                                                                                                                                                                                                                                           |
| Alarm types                | Gas alarm: Latching, 1 <sup>st</sup> and 2 <sup>nd</sup> alarm<br>Trouble alarm: Low flow, sensor disconnection, low battery voltage, Circuit abnormality, detection range abnormality                                                                |
| Alarm methods              | Gas alarm: Intermittent buzzer, flashing lights, gas concentration reading blinks<br>Trouble alarm: Continuous buzzer, flashing lights, trouble condition is displayed                                                                                |
| Preset alarms              | 1st: 10%LEL, 2nd: 50%LEL                                                                                                                                                                                                                              |
| Indication accuracy        | Full scale +/- 5% (at same condition)                                                                                                                                                                                                                 |
| Response time              | Within 30 seconds (T90)                                                                                                                                                                                                                               |
| Sampling method            | Sample-draw, Flow rate > 0.3L/min<br>(Approx. 0.6L/min for pump boosting mode)                                                                                                                                                                        |
| Indication precision       | Digital LCD with 7 segments + Bar meter (50 segment) + Status information<br>Digital numeral 7 segments indication: 0 - 100%LEL<br>Digital bar meter indication: Auto range (0 ~ 10%LEL / 0 ~ 100%LEL)<br>0~10 %LEL (L range)<br>0~100 %LEL (H range) |
| Power source               | AA alkaline battery, 4pcs                                                                                                                                                                                                                             |
| Continuous operation       | More than 20 hours<br>(new battery, no alarm and no indication, at 25°C)                                                                                                                                                                              |
| Operating temp. & humidity | Operating temperature -20 ~ 50°C [-4 ~ 122°F]<br>Operating humidity 0 ~ 95%RH (Non-condensing)<br>Storage temperature -25 ~ 60°C [-13 ~ 140°F]<br>Storage humidity 0 ~ 95%RH (Non-condensing)                                                         |
| Dimension                  | 80.1 (W) × 124 (H) × 36 (D) mm (3.15 (W) × 4.88 (H) × 1.42 (D) inches)                                                                                                                                                                                |
| Weight                     | Approx. 260g (9.2 oz.) (exclude alkaline battery)                                                                                                                                                                                                     |
| Water dust proof           | IP 67                                                                                                                                                                                                                                                 |
| Safety design              | Intrinsically safety ExiallCT4                                                                                                                                                                                                                        |
| Approvals                  | Ex-proof: IECEx, ATEX<br>Other: CE marking                                                                                                                                                                                                            |
| Function                   | LCD backlight, data log, log data indication, peak indication, pump boosting, gas select                                                                                                                                                              |

## Standard accessory



Hand strap



Sampling probe  
(with water trap function)

## Optional accessory



Carrying case



Protection film



Cartridge filter  
• Silicons removal  
• H<sub>2</sub>S removal



Data logger  
management program

## Target gases

Sensitivity curve for 25 gases is originally loaded in GP-1000.  
Target gas can be switched by button operation.

| No. | Gas list               | Name indicated on LCD            | Lower explosion limit LEL |
|-----|------------------------|----------------------------------|---------------------------|
| 1   | Methane                | CH <sub>4</sub>                  | 5.0vol%                   |
| 2   | Isobutane              | i-C <sub>4</sub> H <sub>10</sub> | 1.8vol%                   |
| 3   | Hydrogen               | H <sub>2</sub>                   | 4.0vol%                   |
| 4   | Methanol               | CH <sub>3</sub> OH               | 5.5vol%                   |
| 5   | Acetylene              | C <sub>2</sub> H <sub>2</sub>    | 1.5vol%                   |
| 6   | Ethylene               | C <sub>2</sub> H <sub>4</sub>    | 2.7vol%                   |
| 7   | Ethane                 | C <sub>2</sub> H <sub>6</sub>    | 3.0vol%                   |
| 8   | Ethanol                | C <sub>2</sub> H <sub>5</sub> OH | 3.3vol%                   |
| 9   | Propylene              | C <sub>3</sub> H <sub>6</sub>    | 2.0vol%                   |
| 10  | Acetone                | C <sub>3</sub> H <sub>6</sub> O  | 2.15vol%                  |
| 11  | Propane                | C <sub>3</sub> H <sub>8</sub>    | 2.0vol%                   |
| 12  | Butadiene              | C <sub>4</sub> H <sub>6</sub>    | 1.1vol%                   |
| 13  | Cyclopentane           | C <sub>5</sub> H <sub>10</sub>   | 1.4vol%                   |
| 14  | Benzene                | C <sub>6</sub> H <sub>6</sub>    | 1.2vol%                   |
| 15  | n-Hexane               | n-C <sub>6</sub> H <sub>14</sub> | 1.2vol%                   |
| 16  | Toluene                | C <sub>7</sub> H <sub>8</sub>    | 1.2vol%                   |
| 17  | Heptane                | n-C <sub>7</sub> H <sub>16</sub> | 1.1vol%                   |
| 18  | Xylene                 | C <sub>8</sub> H <sub>10</sub>   | 1.0vol%                   |
| 19  | Ethyl acetate          | EtAc                             | 2.1vol%                   |
| 20  | IPA                    | IPA                              | 2.0vol%                   |
| 21  | MEK                    | MEK                              | 1.8vol%                   |
| 22  | Methyl methacrylate    | MMA                              | 1.7vol%                   |
| 23  | Dimethylether          | DME                              | 3.0vol%                   |
| 24  | Methyl isobutyl ketone | MIBK                             | 1.2vol%                   |
| 25  | Tetrahydrofuran        | THF                              | 2.0vol%                   |

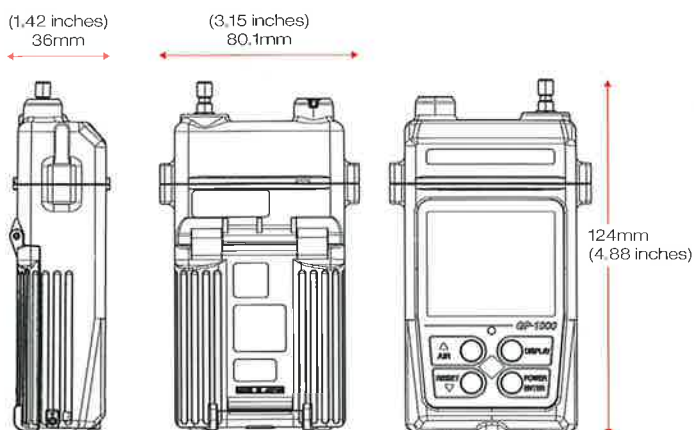
Note 1) Alarm accuracy, response time etc. are confirmed with calibration gas.

Note 2) Contact Riken Keiki if GP-1000 is required to be calibrated with other than CH<sub>4</sub>, i-C<sub>4</sub>H<sub>10</sub>, H<sub>2</sub>.

Note 3) Gas selection is not available when GP-1000 is calibrated with other than CH<sub>4</sub>, i-C<sub>4</sub>H<sub>10</sub>.

Note 4) The measuring results of the gas selection are intended for guidance only.  
For the most accurate measurements, GP-1000 should be calibrated using the target gas.

## Outer dimension



★ Distributed by:

# RIKEN KEIKI Co.,Ltd.

2-7-6 Azusawa, Itabashi-ku, Tokyo 174-8744, Japan

Phone : +81-3-3966-1113

Telefax : +81-3-3558-9110

E-mail : intdept@rikenkeiki.co.jp

Web site : <http://www.rikenkeiki.co.jp>