

# PG-100-G

## Gooseneck Gas Detector



**AMBETRONICS**  
AN ISO 9001:2015 CERTIFIED COMPANY

Flexible gooseneck for easy access into hard to reach locations

Intrinsically Safe

IS/IEC 60079 Part 11 L-7800047118

PESO Approved

EN-50270 EN 61000-6-4 Compliance

GeM Government e Marketplace

MAKE IN INDIA

\* Actual image and size may slightly differ



### CERTIFICATE & APPROVALS

#### INTRINSICALLY SAFE

- CIMFR TR NO. : IN/CIMFR/TR21/R/1341  
DATE : 06/08/2021
- BIS MARK LICENCE NO. : 7800047118
- PESO CERT. NO. : P543659/1  
DATE : 11/08/2022
- Ex ia IIC T6 Ga : Suitable for Hazardous Gas
- Atmospheres Zone : Zone 1 and Zone 2,
- Including Gas Groups : IIA, IIB & IIC
- IS/IEC 60079-0 : 2011
- IS/IEC 60079-11 : 2006
- IS/IEC 60529 : 2001



### Gas Detected

- Natural Gas
- Ethane
- Propane
- Butane
- Acetone
- Alcohol
- Ammonia
- Steam
- Carbon Monoxide (not to quantify)
- Gasoline
- Jet Fuel
- Hydrogen Sulfide
- Smoke
- Industrial Solvents
- Lacquer Thinner
- Naptha

### Features

- "Calibration due" indication and alert
- "Sensor Open/Over" Range Indication In sensor open & over range condition device keep flashing with blue & white colors.
- Optional Data logging & Downloading facility. Downloaded data available in ASCII format (Max: 50,000 records)
- Battery status indication on the LCD with battery charging LED indication & LOW BAT indication with Buzzer Beep sound
- Unit conversion user setting
- Power supply with rechargeable battery
- Small, compact and light-weight
- Pump blockage detection facility in suction type

- The Plug-in Sensor provides a full year of warranted protection against hazardous gases
- The Portable Detector detects smallest gas leak on service line and joints
- Easy handling and programming with 3 keys and one key for power ON/OFF
- Easy software calibration by using front keys
- Digital display of Gas Concentration in %V/V or %LEL or PPM or PPB or  $\mu\text{g}/\text{m}^3$  or  $\text{mg}/\text{m}^3$  on LCD with backlight unit are adjustable by user setting
- User settable Alarm 1 and Alarm 2 LCD display alert with 5 colors Red / Blue / Yellow / Cyan / Violet
- Password protected function menu
- LOW, HIGH, TWA & STEL configurable alarms with buzzer, vibrator alerts & LED indications with multi-color display

## TECHNICAL SPECIFICATIONS

### GENERAL

- Sensors : Electrochemical/Catalytic / Pellistor / PID
- Range/Resolution : As specified in the table
- Detection Method : Diffusion /Suction
- Response Time : Less than 10 Sec
- Parameter Setting : Setting by 3 keys i.e. (SET, SHIFT, INCR)
- Alarm Set Point : Two independent set points, AL1 & AL2 with LED indication
- Alarm Violations : User settable Alarm 1 and Alarm 2 LCD display alert with Settable display 5 colors Red / Blue / Yellow / Cyan / Violet Indicated by Integrated Vibrator & Buzzer (85dB Audible from 1 feet)
- Display : 2-line LCD with backlit. Normal mode White/ Green in colour

### ACCURACY

Sr. No.	SENSOR TECHNOLOGY	CAL ACCURACY
1.	Electrochemical	$\pm 2\%$ FS
2.	Catalytic / Pellistor	$\pm 2\%$ FS
3.	PID 0 TO 5000	$\pm 10\%$ of applied gas
	Range PPM	
	0 TO 1000 PPM	$\pm 5\%$ of applied gas
	0 To 50 PPM	$\pm 3\%$ of applied gaws

### ENVIRONMENTAL

- Operating Temp. :  $-10^\circ\text{C}$  to  $+55^\circ\text{C}$
- Storage Temp. :  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$
- Humidity : Below 95% RH, Non condensing

### OPTIONAL DATA LOGGING

- Logging Capacity : 50,000 records with data available in ASCII format
- Data Download : To the PC Through USB interface using Terminal software

# TECHNICAL SPECIFICATIONS

## COMMON DELIVARABLES

- Test calibration certificate
- Reference calibration gas certificate
- User Manual
- AC Charger Adaptor
- Protection rubber cover
- USB cable (only for data logging option)

## DIMENSIONS & WEIGHT

Material : ABS Plastic  
 Diffusion Type Size : 140 mm(H) x 70 mm(W) x 50 mm (D)  
 extended flexible sensor (Goose neck)  
 sensor Height : 300 mm  
 Weight : 300 gm

## LIST OF AVAILABLE GASES WITH RANGE & RESOLUTION

### ELECTROCHEMICAL SENSOR TECHNOLOGY

SR. NO.	GASES		RANGE	UNIT	RES.
01	Oxygen	(O <sub>2</sub> )	25	% V/V	0.01
02	Oxygen	(O <sub>2</sub> )	100	% V/V	0.1
NT1	Nitrogen	(N <sub>2</sub> )	100	% V/V	0.1
TOXIC GASES					
T1	Ammonia	(NH <sub>3</sub> )	100	PPM	1
T2	Ammonia	(NH <sub>3</sub> )	1000	PPM	1
T3	Bromine	(Br <sub>2</sub> )	10	PPM	0.1
T4	Carbon Monoxide	(CO)	1000	PPM	1
T5	Carbon Monoxide	(CO)	99.99	mg/m <sup>3</sup>	1
T6	Chlorine	(CL <sub>2</sub> )	20	PPM	0.1
T7	Hydrogen	(H <sub>2</sub> )	2000	PPM	1
T8	Hydrogen Bromide	(HB <sub>2</sub> )	100	PPM	1
T9	Hydrogen Chloride	(HCL)	100	PPM	1
T10	Hydrogen Cyanide	(HCN)	100	PPM	1
T11	Hydrogen Fluoride	(HF)	10	PPM	0.1
T12	Hydrogen Fluoride	(HF)	100	PPM	1
T13	Hydrogen Sulfide	(H <sub>2</sub> S)	100	PPM	1
T14	Ozone	(O <sub>3</sub> )	20	PPM	0.1
T15	Ozone	(O <sub>3</sub> )	9999	µg/m <sup>3</sup>	1
T16	Phosphine	(PH <sub>3</sub> )	10	PPM	0.1
T17	Nitrogen Dioxide	(NO <sub>2</sub> )	20	PPM	0.1
T18	Nitrogen Dioxide	(NO <sub>2</sub> )	9999	µg/m <sup>3</sup>	1
T19	Nitric Oxide	(NO)	250	PPM	0.1
T20	Sulphur Dioxide	(SO <sub>2</sub> )	50	PPM	0.1
T21	Sulphur Dioxide	(SO <sub>2</sub> )	2000	PPM	1
T22	Sulphur Dioxide	(SO <sub>2</sub> )	9999	µg/m <sup>3</sup>	1

- NOTE :**
- In above table , range of gases start from zero.
  - Confirm Gas sampling Hose length by enquiry & it is available only for Suction type detector.
  - Gases which are not listed, are available on request & for other details contact factory.
  - All VOC's are available in PID detection principle in PPM ranges.
  - PID detector will be provided by calibration with Isobutylene gas.
  - In PID detector, VOC other than Isobutylene is calibrated with Isobutylene gas by setting VOC correction factor,
  - In Calibration Report, VOC factor with respect to Isobutylene gas will be mentioned.
  - Detection value of VOC = Isobutylene gas concentration value x factor.

### CATALYTIC/PELLISTOR SENSOR TECHNOLOGY

#### COMBUSTIBLE GASES

SR. NO.	GASES		RANGE	UNIT	RES.
C1	Acetone	(CH <sub>3</sub> ) <sub>2</sub> CO	100	% LEL	1
C2	Acetylene	(C <sub>2</sub> H <sub>2</sub> )	100	% LEL	1
C3	Ammonia	(NH <sub>3</sub> )	100	% LEL	1
C4	Butane / n-Butane	(C <sub>4</sub> H <sub>10</sub> )	100	% LEL	1
C5	Carbon Monoxide	(CO)	100	% LEL	1
C6	Ethanol	(C <sub>2</sub> H <sub>5</sub> OH)	100	% LEL	1
C7	Ethyl Acetate	(C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> )	100	% LEL	1
C8	Ethylene	(C <sub>2</sub> H <sub>4</sub> )	100	% LEL	1
C9	Hexane/n-Hexane	(C <sub>6</sub> H <sub>14</sub> )	100	% LEL	1
C10	Hydrogen	(H <sub>2</sub> )	100	% LEL	1
C11	Isopropanol	(CH <sub>3</sub> C <sub>2</sub> H <sub>4</sub> OH)	100	% LEL	1
C12	Methane	(CH <sub>4</sub> )/(HC)	100	% LEL	1
C13	Methyl Ethyl Ketone	(C <sub>4</sub> H <sub>8</sub> O)	100	% LEL	1
C14	Methanol	(CH <sub>3</sub> OH)	100	% LEL	1
C15	N-Heptane	(C <sub>7</sub> H <sub>16</sub> )	100	% LEL	1
C16	N-Pentane	(C <sub>5</sub> H <sub>12</sub> )	100	% LEL	1
C17	Pentane/n-Pentane	(C <sub>5</sub> H <sub>12</sub> )	100	% LEL	1
C18	Propane/n-Propane/LPG	(C <sub>3</sub> H <sub>8</sub> )	100	% LEL	1
C19	Toluene	(C <sub>7</sub> H <sub>8</sub> )	100	% LEL	1
C20	Unleaded Petrol		100	% LEL	1
C21	CNG/LNG/LPG/Natural Gas/Flammable Gas		100	% LEL	1

### PID SENSOR TECHNOLOGY

SR. NO.	GASES	RANGE	UNIT	RES.
P1	Isobutylene (C <sub>4</sub> H <sub>8</sub> )/ Other VOC	50	PPM	0.1
P2	Isobutylene (C <sub>4</sub> H <sub>8</sub> )/ Other VOC	1000	PPM	1
P3	Isobutylene (SPAN C <sub>4</sub> H <sub>8</sub> )/Other VOC	5000	PPM	1

## ORDERING INFORMATION

MODEL NO	DETECTION METHOD	DATA LOGGING OPTION	GAS NUMBER, RANGE, RESOLUTION
PG - 100-G	1) D = Diffusion	1) L = Data Logging	Refer Gas List

Manufactured by :



CIMFR



ISI



PESO



CE



UL



Ex



IECEx



MSME

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