

# GT-1033-FLP

## Smart Gas Detector



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



PROVISIONAL



ORDER CODE : GT-1033-FLP-0-0

### Features

- Industrial standard, 4-20mA output with Respect to Gas Concentration
- Loop Test, Assure Proper Operation of the Transmitter without Calibration Gas
- 3 Color LCD backlit RED, GREEN, BLUE
- Easy Programming with Password Protection
- Fast Response, Easy to Read Display
- Easy to Replace Sensor Module; On Filed Plug-N-Play Module
- Reverse Polarity Protection
- No Additional Power Required
- Highly Reliable, Fast, Accurate for Specific Gas Detection
- User Friendly, Simple to Operate & Easy to install
- Excellent Long Term Stability
- Reduced Operating, Maintenance and Installation Cost, One Man Calibration
- Sensor Open/ Over Range Indication
- Inhibit mode for service purpose, current output settable as per the requirement
- EMC Compliance to IEC- 61000-4 standard

### Applications

- Gas Metering Skid
- Oil & Gas Industries
- Refineries
- Stack Monitoring
- Sewage Plants
- Ambient Monitoring
- Control Atmosphere
- Chemical Processing Plant
- Cold Storage
- Offshore Drilling & Processing Platform
- Coal Mine and Confined Area
- Chemical & Petrochemical Plants
- Acid Alkalize & Dyes mfg. Plants
- Bullets Yards / Storage Yard
- Gas Metering Station Burner / Furnace Areas
- Fertilizers Plants
- Gas Cylinder Bank
- Gas Pipeline Projects
- Chlorination Plant
- Pulp & Paper plants
- Heat Treatment Plants
- Chemical Storage Area
- Power & industrial Plants
- Automotive industrial / Plants Shops

### Approvals & Compliance

- Approval & Compliance for Flameproof Enclosure by Certified to Ex db IIC T6 Gb Ex/Tb/Tc IIIC T85°C Db/Dc IP66
- CIMFR CERTIFICATE NO. : IN/CIMFR/TR22/P/1817 Dt. : 08/09/2023
- PESO CERTIFICATE NO. : P547497/1 Dt. : 28/09/2022
- INTRINSICALLY SAFE PRODUCT : Ex d (ia) IIC T6 Ga IP-68
- CIMFR CERTIFICATE NO. : IN/CIMFR/TR22/P/3121 Dt. : 18/01/2022
- PESO CERTIFICATE NO. : P543372/1 Dt. : 22/08/2022

Sensor : Electrochemical Sensor / NDIR  
 Range / Resolution : As specified in the Table  
 Detection Method : Diffusion  
 Response Time : Less than 10 sec  
 Display : 3 Color LCD backlit RED, GREEN, BLUE  
 Set Point : Two Independent set point, with alarm symbol for indication purpose. (There is no relay output)  
 Settings : By using Magnetic Wand

Toxic / O<sub>2</sub> : ±2% of Full Scale Range  
 NDIR Ch<sub>4</sub> : ±0.2% V/V or %5 of Applied Gas

Power Supply & Load Resistance : Load Driving capacity as follows  
 a) 820 Ω at 24VDC to 36VDC    b) 680 Ω at 22VDC to 36VDC  
 c) 560 Ω at 20VDC to 36VDC    d) 47 Ω at 87VDC to 36VDC

- 1) During Sensor break / open the display shows 'OPEN' & Loop current will be Upscale / Downscale.
- 2) During Over Range the display shows 'OVER' & Loop current will be Upscale / Downscale. • Upscale : 21mA    • Downscale : 3.7mA
- 3) Inhibit mode current adjustable 3.8mA / 4mA (for Toxic / NDIR) & 3.8mA / 17.4mA (for Oxygen), user programmable.

Standard : 4-20mA Loop current output with configurable range

Operating Temp : -15°C to +50°C  
 Storage Temp : -10°C to +60°C

- CE certified 24VDC power supply
- Gas sampling & conditioning system
- Canopy & Mounting stand

Protection Class : IP66  
 Cabinet Material : Cast aluminum alloy, LM-6  
 Approval : CMRI approved for IIA & IIB or IIC gas group  
 • CIMFR CERTIFICATE NO. : IN/CIMFR/TR22/P/1817 Dt. : 08/09/2023  
 • PESO CERTIFICATE NO. : P547497/1 Dt. : 28/09/2022  
 Cable entry : Double compression cable gland EX-proof M20 x 1.5(P)  
 • CIMFR CERTIFICATE NO. : IN/CIMFR/TR21/R/2147 Dt. : 12/10/2021  
 • PESO CERTIFICATE NO. : P538850/7 Dt. : 16/06/2022  
 Stopping Plug : (M20 x 1.5P & M25 x 1.5P)  
 • CIMFR CERTIFICATE NO. : IN/CIMFR/TR21/R/1143 Dt. : 23/07/2021  
 • PESO CERTIFICATE NO. : P538850/3 Dt. : 16/06/2022  
 Mounting : Wall Mounting / Stand Mounting / Pipe Mounting  
 Dimension : 195mm (H) with Sensor Holder x 197mm (W) x 97mm (D)  
 Weight : Approximately 1.517 kg

# GAS WITH RANGE & RESOLUTION

## ELECTROCHEMICAL SENSOR TECHNOLOGY

SR.NO	GASES	RANGE	UNIT	RES	ORDER CODE
1	Oxygen (O <sub>2</sub> )	25	%V/V	0.01	SSM-FLP-O2-EC-08-03
3	Nitrogen (N <sub>2</sub> )	100	%V/V	0.1	SSM-FLP-N2-EC-14-03
TOXIC GASES					
1	Ammonia (NH <sub>3</sub> )	100	PPM	1	SSM-FLP-NH3-EC-14-01
2	Ammonia (NH <sub>3</sub> )	1000	PPM	1	SSM-FLP-NH3-EC-24-01
3	Bromine (Br <sub>2</sub> )	10	PPM	0.1	SSM-FLP-BR2-EC-05-01
4	Carbon Monoxide (CO)	1000	PPM	1	SSM-FLP-CO-EC-24-01
5	Carbon Monoxide (CO)	2000	PPM	1	SSM-FLP-CO-EC-28-01
6	Chlorine (Cl <sub>2</sub> )	10	PPM	0.1	SSM-FLP-CL2-EC-05-01
7	Ethylene Oxide (ETO)	100	PPM	1	SSM-FLP-ETO-EC-14-01
8	Hydrogen (H <sub>2</sub> )	2000	PPM	1	SSM-FLP-H2-EC-26-01
9	Hydrogen Bromide (HBr)	100	PPM	1	SSM-FLP-HBR-EC-14-01
10	Hydrogen Chloride (HCL)	100	PPM	1	SSM-FLP-HCL-EC-14-01
11	Hydrogen Cyanide (HCN)	100	PPM	1	SSM-FLP-HCN-EC-14-01
12	Hydrogen Fluoride (HF)	10	PPM	0.1	SSM-FLP-HF-EC-05-01

## TOXIC GASES

SR.NO	GASES	RANGE	UNIT	RES	ORDER CODE
13	Hydrogen Fluoride (HF)	100	PPM	1	SSM-FLP-HF-EC-14-01
14	Hydrogen Sulfide (H <sub>2</sub> S)	100	PPM	1	SSM-FLP-H2S-EC-14-01
15	Ozone (O <sub>3</sub> )	20	PPM	0.1	SSM-FLP-O3-EC-06-01
16	Phosphine (PH <sub>3</sub> )	10	PPM	0.1	SSM-FLP-PH3-EC-05-01
17	Nitrogen Dioxide (NO <sub>2</sub> )	20	PPM	0.1	SSM-FLP-NO2-EC-06-01
18	Nitric Oxide (NO <sub>2</sub> )	250	PPM	1	SSM-FLP-NO-EC-17-01
19	Sulfur Dioxide (SO <sub>2</sub> )	50	PPM	0.1	SSM-FLP-SO2-EC-11-01
20	Sulfur Dioxide (SO <sub>2</sub> )	2000	PPM	1	SSM-FLP-SO2-EC-26-01

## NDIR SENSOR TECHNOLOGY

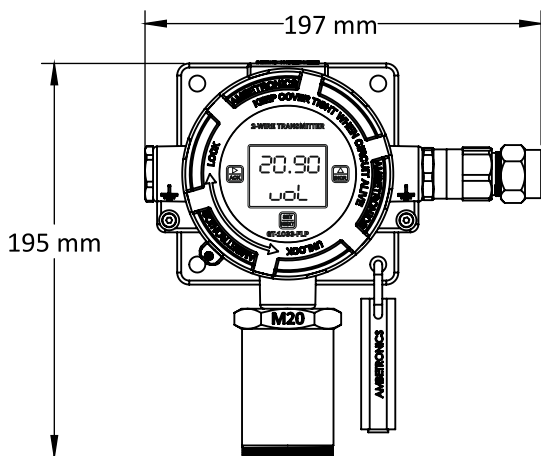
SR.NO	GASES	RANGE	UNIT	RES	ORDER CODE
4	Methane (CH <sub>4</sub> )	100	%LEL	1	SSM-FLP-METHANE-IR-14-03

**NOTE:**

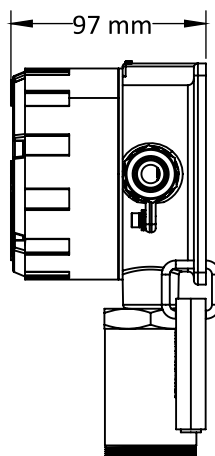
- In above Table, Range of gases start from zero
- Gases which are not listed, are available on request & for other details contact to factory.

## DIMENSION & MOUNTING DETAILS

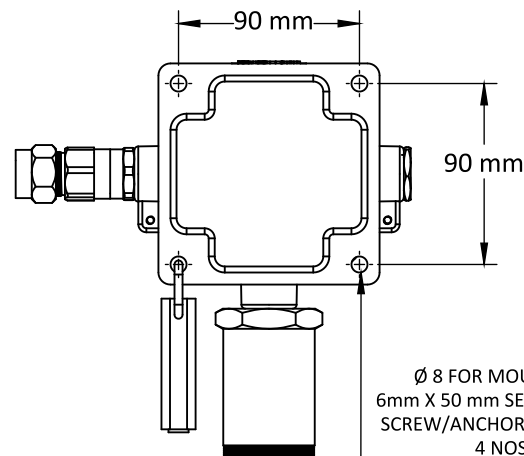
**FRONT VIEW**



**SIDE VIEW**



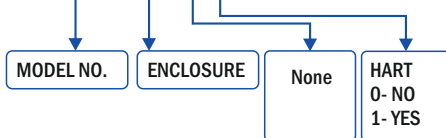
**BACK VIEW**



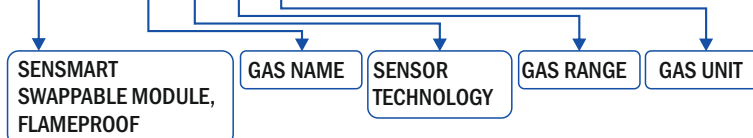
Ø 8 FOR MOUNTING  
6mm X 50 mm SELF THREADED  
SCREW/ANCHOR FASTENERS  
4 NOS.

## ORDERING INFORMATION

**1) GT-1033-FLP-0-0**



**2) SSM-FLP-02-EC-08-03**



(E.g. Flameproof SenseSmart Swappable Module;  
Gas Name: OXYGEN (O<sub>2</sub>);  
Sensor operating Principle/ Technology: Electrochemical (EC)  
Gas Range & Unit: 25.00 %V/V)

\*Before placing order please refer the above ordering information or contact below address for assistance

Manufactured by :



**AMBETRONICS ENGINEERS PVT. LTD.**

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