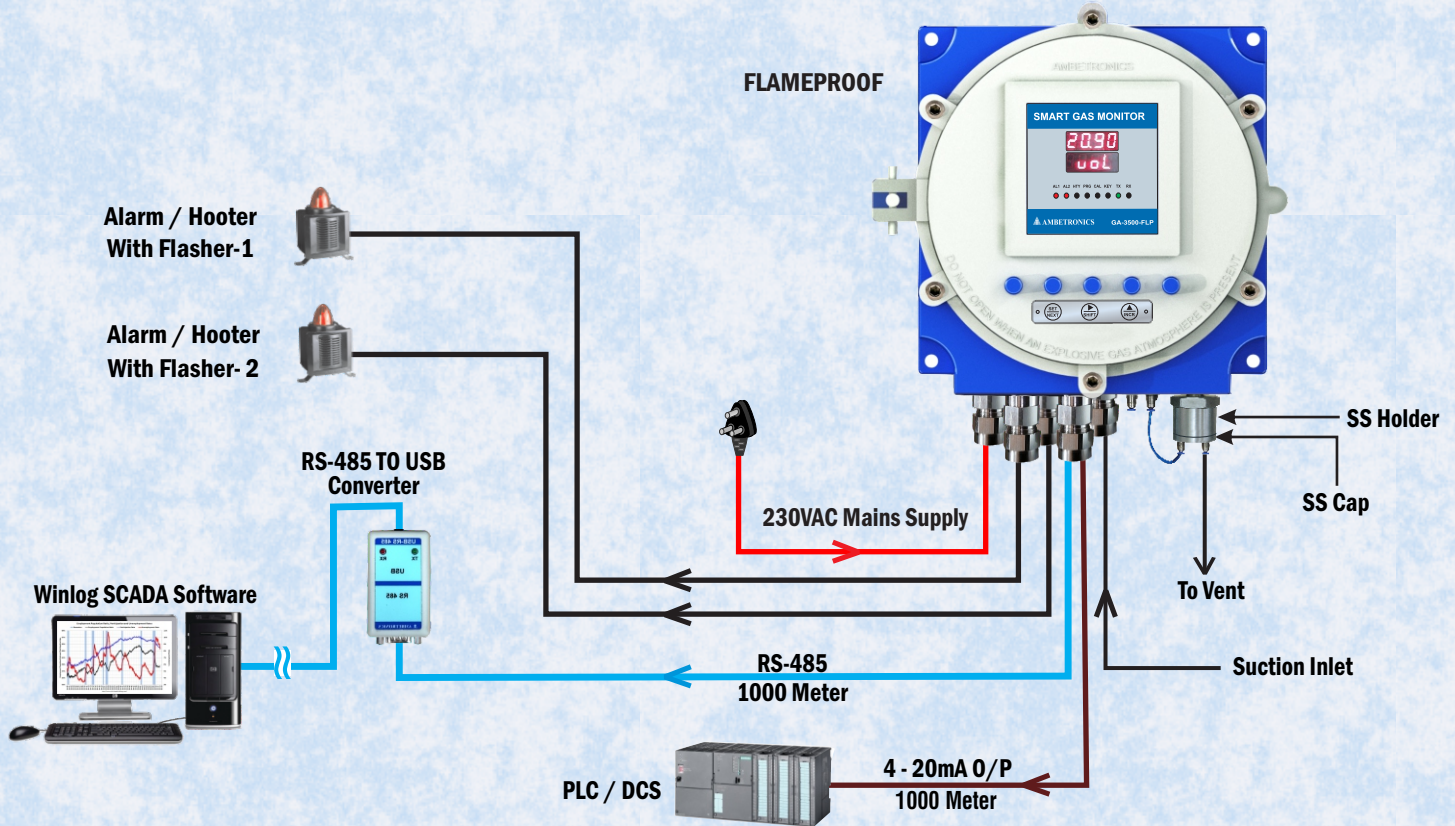


# SMART GAS MONITOR : FOR OXYGEN / TOXIC / COMBUSTIBLE GASES



## Features

- Provides a fast and reliable output by using Electro Chemical Sensor Technology.
- Optimized for detection of smallest leak of Oxygen & Toxic Gases.
- Highly resistant to poisoning and etching.
- Capable of detecting down to PPM & %V/V.
- Digital display of Gas Concentration on LED Display for GA-3500
- Standard 4-20mA signal output with configurable range.
- Easy handling and programming with 3 keys for Flameproof Models.
- Password protected programming with password changing facility.
- Shows peak value of gas concentration with a single key press.
- Optional Alarm relay contacts with two configurable Alarm levels & one Relay for fail safe relay.
- Optional RS-485 communication port with MODBUS RTU Protocol.

## Applications

- Plant shop
- Refineries
- Welding
- Hospitals
- Painting
- Wineries
- Cold Room
- Tank Farms
- Power Plant
- Laboratories
- Nitrogen Tanks
- Steel Industry
- Clandestine Labs
- Confined Spaces
- Swimming Pools
- Offshore E & P
- Pharmaceutical
- Water Treatment
- Textile Industry
- Animal husbandry
- Beverage Industry
- Plant construction
- Stack Monitoring
- Building protection
- Boiler Plant Rooms
- Beverage Dispenser
- Bio Gas Application
- Process Monitoring
- Oil & Gas Industry
- Chemical Industry
- Perimeter Monitoring
- Automotive Industries
- Work Place Monitoring
- Sewage Treatment Plants
- Fresh Water Pumping Station
- Land fill/ Bio Gas Generation
- Refrigeration Plants / Monitoring
- Underground Car parking / Tunnels
- Commercial Building Infrastructure
- Planned Equipment Modifications
- Turnarounds and plant shutdowns
- Hazardous Material storage / Gas Suppliers

**MUST FOR HUMAN AND INDUSTRIAL SAFETY**

# TECHNICAL SPECIFICATIONS

## General

Detection Principle : Electrochemical / Catalytic Bead / Pellistor / Siegistor  
 Detection Method : Suction method by using vacuum pump  
 Suction Capacity : 0.5 LPM to 1.5 LPM- (other available on request)  
 Gases Detected : Oxygen / Toxic / Combustible Gases (please define)  
 Display : 2-Line, 4-Digit 8mm(H) Seven Segment LED Display & 8 LEDs to indicate status of instrument  
 Control Action : i) Two independent alarm set points with Latch & Non-Latch Facility.  
 ii) User selectable Hysteresis and Logic option.  
 iii) Configurable STEL and TWA set points for Toxic Gases (Optional)  
 Setting : By using 3 Keys on front panel

## Performance

Accuracy : ±2% of Full Scale.  
 Response Time : Less than 10 seconds.

## Electrical

Supply Voltage : 240VAC / 50 Hz, (±10%)  
 Power Consumption : Less than 20 Watts.  
 Cable : For Flameproof Model : 3 Core copper wire, Shielded Armored Cable.

## Error Monitoring

- i) During Sensor Break / Open, the Display shows 'SEnS oPEn' & 4-20mA output goes down to 3.7mA for Combustible gases only.
- ii) During Over Range, the Display shows 'ouErAnG' & 4-20mA output goes up to 21mA.

## Environmental

Operating Temp. : 0° to +50°C  
 Storage Temp. : -10° to + 60°C  
 Humidity : Less than 95% Non-Condensing.

## Output Signal

Standard : 4-20mA Current Output with configurable range selection with 470 ohm load driving capacity.  
 Optional : a) Three SPDT Relay (one for FailSafe & Two for Alarm indication) of rating. 5A/250VAC, 5A/ 30VDC  
 b) 0 to 10VDC  
 c) RS-485 isolated Port with MODBUS RTU protocol.

## Accessories (Optional)

- CE certified 24 VDC Power Supply.
- Canopy & Stand Mounting.
- Gas Calibration Kit (0.5,1,3,10) Litre.
- Hooter Cum Flasher.
- Gas Sampling & Conditioning System.
- RS-485 to USB OR RS-232 Converter.
- PC Based SCADA Software, Modem.

## Flameproof Housing

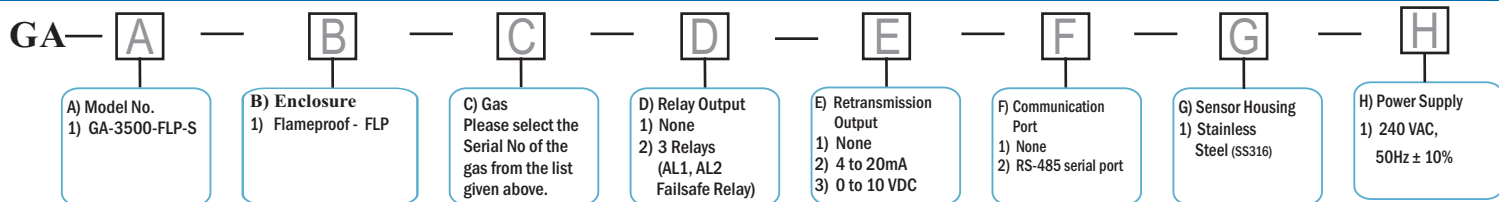
Degree of Protection Class : IP-66  
 • CIMFR CERTIFICATE NO. : CIMFR/TC/P/1923 Dt. : 26/08/2019  
 • PESO CERTIFICATE NO. : P468728/1 Dt. : 21/02/2020  
 Housing Material : cast Aluminum Lm6 Alloy or cast Iron (C.I.) Enclosure  
 Cable Entry : Flameproof, Weatherproof IP66 Double compression cable gland (Ex d) Model No. : CG/FLP/2C M20 x 1.5 (P) & M25 x 1.5(P), ½" NPT & ¾" NPT  
 • CIMFR CERTIFICATE NO. : CIMFR/TC/P/1313 Dt. : 19/09/2018  
 • PESO CERTIFICATE NO. : P431645/2 Dt. : 19/11/2019  
 Dimension : 350 mm (H) x 290 mm (W) x 170 mm (D)  
 Mounting : Wall Mounting / Stand Mounting / Pipe Mounting  
 Weight : Approx 6Kg

## LIST OF GAS TRANSMITTERS WITH RANGES & RESOLUTION

S.N.	GASES	RANGE	UNIT	RES.	S. N.	GASES	RANGE	UNIT	RES.	S. N.	GASES	RANGE	UNIT	RES.
01	Oxygen (O <sub>2</sub> )	25	%Vol.	0.1	T13	Hydrazine (N <sub>2</sub> H <sub>4</sub> )	1	PPM	0.01	<b>COMBUSTIBLE GASES</b> C12 Acetone (CH <sub>3</sub> ) <sub>2</sub> CO 100 %LEL 1 C13 Ethanol (C <sub>2</sub> H <sub>5</sub> OH) 100 %LEL 1 C14 Ethyl Acetate (CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub> ) 100 %LEL 1 C15 Ethylene (C <sub>2</sub> H <sub>4</sub> ) 100 PPM 1 C16 Hydrogen (H <sub>2</sub> ) 100 %LEL 1 C17 Isopropanol (CH <sub>3</sub> C <sub>2</sub> H <sub>4</sub> OH) 100 %LEL 1 C18 Methanol (CH <sub>3</sub> OH) 100 %LEL 1 C19 Methyl ethyl ketone (CH <sub>3</sub> -CO-C <sub>2</sub> H <sub>5</sub> ) 100 %LEL 1 C20 N-heptane (C <sub>7</sub> H <sub>16</sub> ) 100 %LEL 1 C21 N-pentane (C <sub>5</sub> H <sub>12</sub> ) 100 %LEL 1 C22 N-octane (C <sub>8</sub> H <sub>18</sub> ) 100 %LEL 1 C23 Toluene (C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub> ) 100 %LEL 1 C24 Ammonia (NH <sub>3</sub> ) 100 %LEL 1 C25 Carbon Monoxide (CO) 100 %LEL 1 C26 Unleaded Petrol 100 %LEL 1				
02	Oxygen (O <sub>2</sub> )	100	%Vol.	0.1	T14	Bromine (Br <sub>2</sub> )	20	PPM	0.01					
<b>TOXIC GASES</b>					T15	Hydrogen Fluoride (HF)	10	PPM	0.01					
T1	Carbon Monoxide (CO)	1000	PPM	1	<b>COMBUSTIBLE GASES</b> T16 Phosgene/Cobalt (II) Chloride (COCL <sub>2</sub> ) 1 PPM 0.01									
T2	Sulphur Dioxide (SO <sub>2</sub> )	50	PPM	0.1										
T3	Hydrogen Sulfide (H <sub>2</sub> S)	100	PPM	1	C1	Methane (CH <sub>4</sub> )	100	%LEL	1					
T5	Ammonia (NH <sub>3</sub> )	100	PPM	1	C2	Butane/n-Butane(C <sub>4</sub> H <sub>10</sub> )	100	%LEL	1					
T6	Hydrogen (H <sub>2</sub> )	1000	PPM	1	C3	Propane/n-Propane (C <sub>3</sub> H <sub>8</sub> )	100	%LEL	1					
T7	Chlorine (CL <sub>2</sub> )	20	PPM	0.01	C4	Acetylene (C <sub>2</sub> H <sub>2</sub> )	100	%LEL	1					
T8	Hydrogen Chloride (HCL)/ Hydrogen Bromide (HBR)	200	PPM	1	C5	Hexane/n-Hexane (C <sub>6</sub> H <sub>14</sub> )	100	%LEL	1					
T9	Nitrogen Dioxide (NO <sub>2</sub> )	20	PPM	0.01	C6	CNG	100	%LEL	1					
T10	Hydrogen Cyanide (HCN)	100	PPM	1	C7	LNG	100	%LEL	1					
T11	Ozone (O <sub>3</sub> )	5	PPM	0.01	C8	LPG	100	%LEL	1					
T12	Phosphine (PH <sub>3</sub> )	10	PPM	0.01	C9	Natural Gas	100	%LEL	1					
					C10	Pentane/n-Pentane (C <sub>5</sub> H <sub>12</sub> )	100	%LEL	1					
					C11	Flammable (Explosive) Gas	100	%LEL	1					

\* Please specify if any other gases and gas range you require which is not in the list Available on Request

## ORDERING INFORMATION



\* Before placing order please Refer the above ordering information or Contact below address for assistance.

Manufactured by :

## AMBETRONICS ENGINEERS PVT. LTD.

17-B, Tarun Industrial Estate, Mogra Pada, New Nagardas Road, Andheri (E.) Mumbai - 400 069, India.

Mob.: +91-9320619646 • +91-9167418106 • Tel.: +91-22-61673000/27, 28371143

E-mail : project@ambetronics.com • sales14@ambetronics.com • Web : www.ambetronics.com



Follow us on



www.ambetronics.com

Version : GA-3500-FLP-S-R1-23-01-2021

Specifications subject to change without any prior notice