

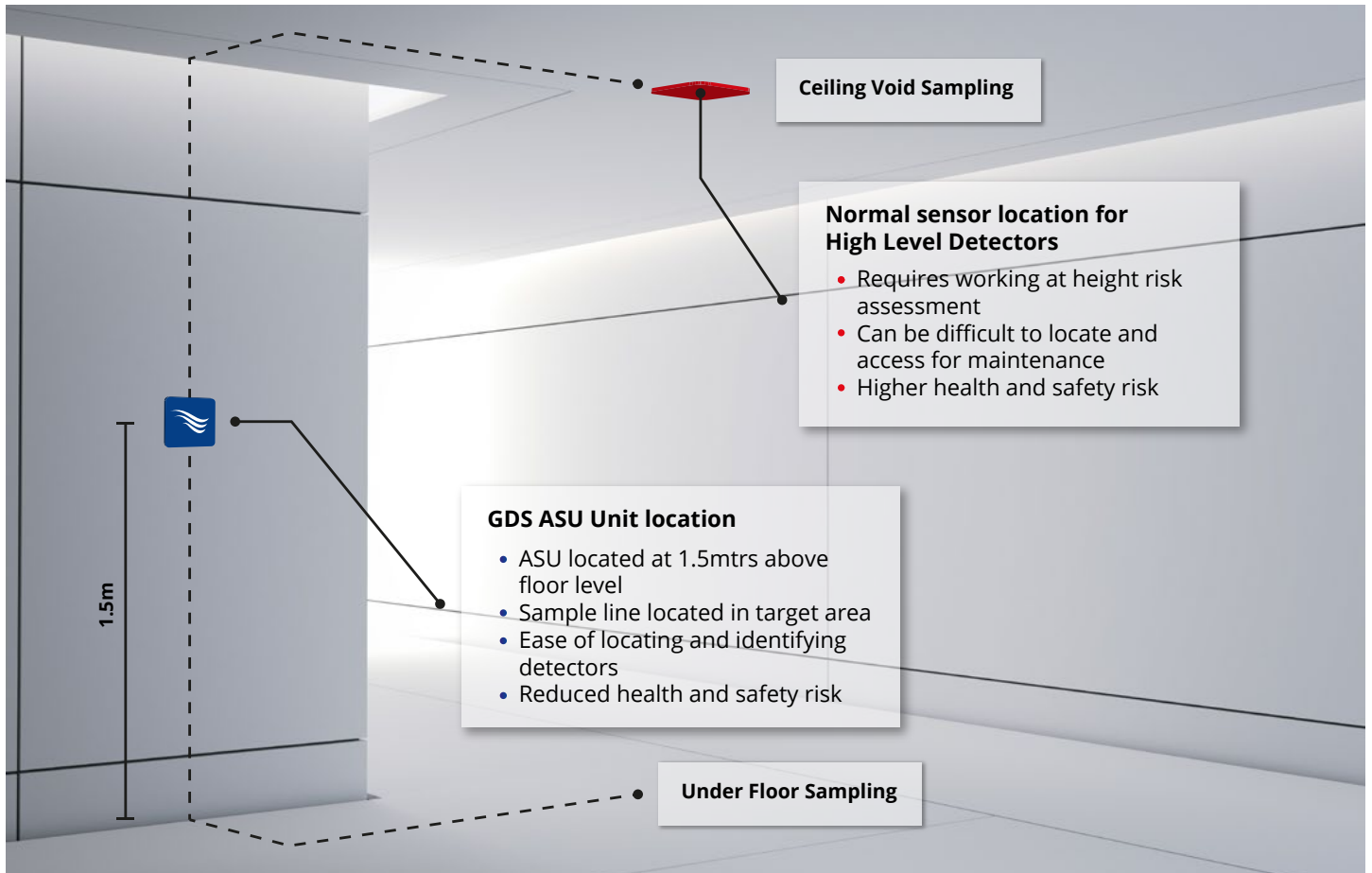


**ASPIRATED SENSOR UNIT**  
AMBIENT AIR MONITORING ASU-1 & ASU-2  
*'The New Way - The Only Way  
Gas Detection for the Future'*



**PRODUCT DESCRIPTION:**

Designed with occupational health and safety in mind, the ASU is leading the way in the management of worker wellness and wellbeing. With the ASU located at 1.5m above floor level, either as a stand-alone unit or as part of a network system, a sample draw line continuously monitors from the target area. With specialist maintenance safety equipment no longer a requirement and a consistent working height for the operator, the ASU reduces the whole bill whilst significantly improving worker safety.



### Advantages of the Aspirated Sensor Unit:

- Engineers, architects and consultants no longer have to compromise in their preferred and most effective detector location.
- Improved safety - avoids working at height and confined space regulations.
- Significant reduction in engineering time required on site without disruption and downtime around operational areas.
- No specialist safety equipment or health and safety training required for service and maintenance.
- No specialist access equipment for high level or underground areas, therefore no requirement for second maintenance operative.
- Consistent working height for worker and maintenance staff with no access required into harsh / hazardous areas.
- No more work at ground level in reduced light conditions and confined spaces or at high levels in hot dusty conditions for maintenance personnel.
- Significant saving of administration time when scheduling hazardous area work.
- Low cost of equipment ownership and ongoing maintenance.
- Reduced mechanical damage to detector housings.



### Features of the Aspirated Sensor Unit:

- Pump, Gas Sensor, Transmitter' Up to 100m long sample line.
- Robust, reliable long life active components.
- Stand-alone or part of a network system (see GDS Combi addressable system).
- Detectors located at 1.5m regardless of target gas density.
- Increased equipment reliability due to improved operating conditions.
- Detectors can be located in clean stable environments.
- Work area staff have clear sight of detector status.
- Ease of locating and identifying detectors.
- Allows constant monitoring of harsh environments, where detectors cannot be located or when installation/maintenance staff cannot gain access.



# GASES AND RANGES

Gas	Relative Density Air =1	Units	Standard Range	Alarm Level 1	Alarm Level 2
Oxygen (O <sub>2</sub> )	1.105	% Vol	0-25%	19%	17%
Carbon Monoxide (CO)	0.96	ppm	0~200ppm	20ppm	100ppm
Sulphur Dioxide (SO <sub>2</sub> )	2.26	ppm	0~5ppm	0.5ppm	1ppm
Nitric Oxide (NO)	1.03	ppm	0~10ppm	2ppm	3ppm
Nitrogen Dioxide (NO <sub>2</sub> )	2.62	ppm	0~5ppm	0.5ppm	1ppm
Hydrogen (H <sub>2</sub> )	0.06	ppm	0~2000ppm	250ppm	500ppm
Hydrogen Cyanide (HCN)	0.93	ppm	0~10ppm	0.9ppm	4.5ppm
Hydrogen Sulphide (H <sub>2</sub> S)	1.18	ppm	0~50ppm	5ppm	10ppm
Ammonia (NH <sub>3</sub> )	0.58	ppm	0~100ppm	25ppm	35ppm
Methane (CH <sub>4</sub> )	0.55	% LEL	0~100%	20%	40%
Propane (C <sub>3</sub> H <sub>8</sub> )	1.55	% LEL	0~100%	20%	40%
Butane (C <sub>4</sub> H <sub>10</sub> )	2.11	% LEL	0~100%	20%	40%
Pentane (C <sub>5</sub> H <sub>12</sub> )	2.48	% LEL	0~100%	20%	40%
LPG	1.55	% LEL	0~100%	20%	40%
Hydrogen (H <sub>2</sub> )	0.06	% LEL	0~100%	20%	40%
Carbon Dioxide (CO <sub>2</sub> )	1.52	% Vol	0-2%	0.50%	1.50%
Methane (CH <sub>4</sub> )	0.55	% LEL	0~100%	20%	40%
Propane (C <sub>3</sub> H <sub>8</sub> )	1.55	% LEL	0~100%	20%	40%
Butane (C <sub>4</sub> H <sub>10</sub> )	2.11	% LEL	0~100%	20%	40%
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LPG	1.55	% LEL	0~100%	20%	40%
Ethanol (C <sub>2</sub> H <sub>60</sub> )	1.51	% LEL	0~100%	20%	40%
Iso-butylene (C <sub>4</sub> H <sub>8</sub> )	1.94	ppm	200ppm	20ppm	40ppm

Over 700 gas types are available – Contact our sales department with your requests - sales@gds-technologies.co.uk

**E:** sales@gds-technologies.co.uk **T:** +44 (0)113 286 0166

**GDS TECHNOLOGIES LTD | FUSION POINT | ASH LANE | GARFORTH | LEEDS | LS25 2GA | UK**

**www.gds-technologies.co.uk**

# SPECIFICATION

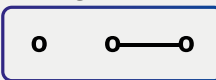
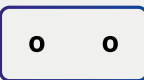
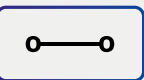
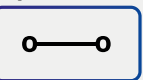
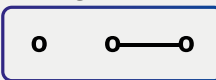
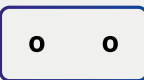
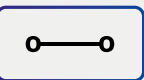
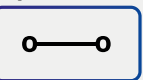
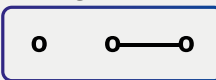
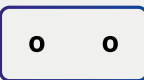
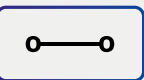
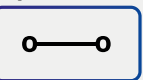
PUMP/FLOW MONITOR	ASU-1	ASU-2
Input	24v DC ±20% 70mA	24v DC ±20% 170mA
Flow Rate	0.4~1.0 litres/min	4~5 litres/min
Continuous Running	Pump Motor – 6 years expected Diaphragm – 3 years in air	
Flow Fail Monitor	Green LED – normal operation RED LED – fault – pipe blockage / pump fail (F/F) Sounder – not less than 85dB @ 30cm	
Outputs	Relay S.P.C.O 4Amp @ 24vDC – NE/ND flow fail Selectable (FF) output 5/15v DC Factory set – open drain	
Sample Line	Max Length – 50m, min 1m 6mm OD 4mm ID Material – nylon, polypropylene, PTFE	Max Length – 100m, min 1m 6mm OD 4mm ID Material – nylon, polypropylene, PTFE
Couplings	In/Out – push fit – barbed, enclosure base/rear	

TRANSMITTER	
Type	Addressable (Network) / Direct
Gases	Flammable Oxygen Toxic
Outputs	4~20mA direct 3 wire output via NC flow fail (FF) relay contact CANbus addressable – 4 wire Others – Contact GDS Data logging – intervals – variable time Roll over / stop storage 2,880 readings
Sensor	Electrochemical Infrared Semiconductor Pellistor – Catalytic PID

ENCLOSURE	
Type	30J Safe area use only
Protection	IP64
Operating Temperature	-15°C to 55°C
Relative Humidity	0-95 non condensing
Dimensions	H – 145 W – 147 D – 90 mm
Material	ABS Flame Retardant FR40 Lid Screws M4SS
Finish	Signal White RAL 9003
Weight - Finished Product	520gms <span style="float: right;">710gms</span>
Entries - cable	Rear 5 x 20mm knock outs, Base 2 x 20mm knock outs

### MOUNTING/POSITION

The pump sensor unit should be mounted at chest height with the sample line travelling to the chosen target area at either maximum height for lighter than air gases or minimum low level (100mm) for heavier than air gases.

FIELD TERMINALS	JUMPER SELECTION																		
<p>RELAY VOLT FREE      24vDC IN      O/P</p> <table border="1"> <tr> <td>NC</td> <td>C</td> <td>NO</td> <td>+</td> <td>-</td> <td>FF</td> </tr> </table>	NC	C	NO	+	-	FF	<table border="1"> <tr> <td>FF Signal Select</td> <td>FF/NE</td> <td>Mute Sounder</td> <td>Spare Links</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15v</td> <td>5v</td> <td></td> <td></td> </tr> </table>	FF Signal Select	FF/NE	Mute Sounder	Spare Links					15v	5v		
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