



ASPIRATED SENSOR UNIT

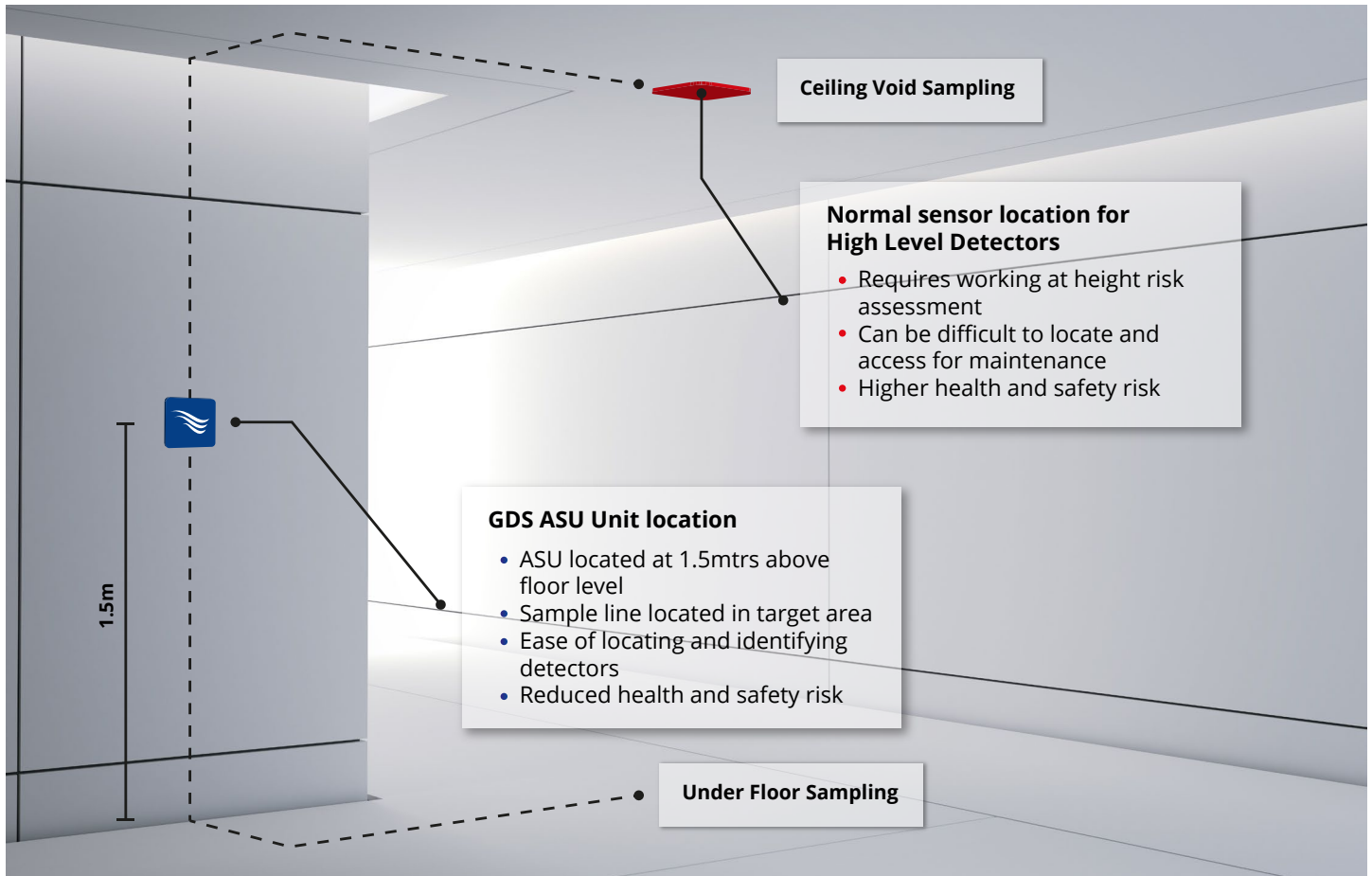
ASU-1 & ASU-2

*'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:

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

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

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PUMP/FLOW MONITOR		ASU-1	ASU-2
Input		24v DC ±20% 70mA	24v DC ±20% 170mA
Flow Rate		> 0.8 litres/min	>3 litres/min
Maximum Vacuum		-250mbar	-800mbar
Continuous Running		Pump Motor – 6 years expected Diaphragm – 3 years in air	
Flow Fail Monitor		Green LED – normal operation RED LED – fault – pipe blockage / Amber LED / pump fail 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 6mm OD 4mm ID Material – nylon, polypropylene, PTFE	Max Length – 100m 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	710gms
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	
RELAY VOLT FREE 24vDC IN O/P NC C NO + - FF		FF Signal Select FF/NE Mute Sounder Spare Links 15v 5v	

