

VESDA Sensepoint XCL Gas Detection - Glossary of Terms

Terminology	Description	Relevance to VESDA Sensepoint XCL
Analogue signal	Analogue signal A variable electrical output generated by a detector typical 4-20 mA. Where 4 mA = 0 on the detectors measuring range and 20 mA = full scale.	VESDA Sensepoint XCL gas detector has 4-20 mA Analogue output (dependent on version) which could be used to integrate to 3rd party systems e.g. a BMS system to operate variable speed fans.
AIT (Auto Ignition temperature)	The minimum temperature at which an explosive gas air mixture will self-ignite without any other source of ignition. Measured in degrees C or F.	Applications operating at these temperatures require specialized equipment and approvals. Not suitable for VESDA Sensepoint XCL.
Alarm thresholds	The value at which an alarm output from a detector is generated.	VESDA Sensepoint XCL has fully configurable alarm threshold via Sensepoint App.
Baseefa	An approved European Notified Body based in the UK with the authority to certify electrical products designed for use in potentially explosive atmospheres.	VESDA Sensepoint XCL is not certified for use in potentially explosive atmospheres.
Bump Testing	The application of a test gas, of a known concentration, on to a gas detector to verify it responds to gas.	VESDA Sensepoint XCL has an integral test gas port for the application of bump test gas.
Catalytic Sensor	A well proven detection principle used for the detection of flammable gases. Used extensively throughout the gas detection industry. This principle is not 'fail safe' and all detectors should be 'bump tested' and or recalibrated every 6 months to compensate for any loss of sensitivity.	VESDA Sensepoint XCL uses this principle for monitoring flammable gases.
CE	Indicates compliance to all relevant European directives.	VESDA Sensepoint XCL is CE approved for safe areas and complies with the relevant European EMC directive.
Class 1 Div 1 Class 1 Div 2	The classification of an area based on the likelihood of an explosive risk. This system is predominantly used in the US and parts of the Middle East and Far East. See potentially explosive atmospheres.	Equipment used within these areas requires special approvals. VESDA Sensepoint XCL does not have these approvals.
COSHH	Canadian Standards Association, an approved Canadian Notified Body with the authority to certify electrical products designed for use in potentially explosive atmospheres.	VESDA Sensepoint XCL is not certified for use in potentially explosive atmospheres.
Electrochemical Cell	A well proven detection principle used for the detection of toxic gases and used extensively throughout the gas detection industry. This principle is not 'fail safe' and all detectors should be 'bump tested' and or re-calibrated every 6 months to compensate for any loss of sensitivity.	VESDA Sensepoint XCL uses this principle for monitoring toxic gases.
Exd Flameproof	One method of protection used for electrical equipment designed for use in potentially explosive atmospheres.	VESDA Sensepoint XCL is not certified for use in potentially explosive atmospheres.
Exi Intrinsically safe	One method of protection used for electrical equipment designed for use in potentially explosive atmospheres.	VESDA Sensepoint XCL is not certified for use in potentially explosive atmospheres.
Fixed point system	A permanently installed gas detection system typically using individual fixed-point gas sensors and/or transmitters.	VESDA Sensepoint XCL is a fixed /permanent installed gas detection solution.
FM	Factory Mutual – US Insurance and Certification authority.	VESDA Sensepoint XCL is not FM approved.
Gas Analyser	A piece of analytical equipment used to measure extremely accurate concentrations of gas used in laboratory experiments or on a process plant to control process parameters.	VESDA Sensepoint XCL is a gas detector designed to detect the escape of a gas and not an analytical instrument. VESDA Sensepoint XCL is suitable for use in areas for detecting gas escapes.
Gas Detector	An electrical piece of equipment designed to detect the escape of a gas and send a signal, from which executive actions can be taken.	VESDA Sensepoint XCL is a gas detector.
Gas Monitor	Similar to Gas Detector.	VESDA Sensepoint XCL is a gas detector.
Hazardous area	See potentially explosive atmospheres.	Equipment used within these areas require special approvals. VESDA Sensepoint XCL does not have these approvals.
IDLH	Immediately Dangerous to Life to Health. The concentration at which health and life will be adversely affected. Measured in parts per million (ppm).	Used to determine the best detection range and relevant alarm threshold. Values can vary between geographical regions.
IEC	The International Electro-Technical Committee writes and publishes internationally recognized product design standards.	VESDA Sensepoint XCL has been designed to the relevant IEC standards for electrical safety.
IP rating	Ingress Protection. A measure of an enclosures protection against the ingress of dust and water.	VESDA Sensepoint XCL has an IP 65 rating.
LED	Light Emitting Diode.	VESDA Sensepoint XCL uses on-board colored LED to indicate Power, Fault, Inhibit and Alarm.

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LEL	Lower Explosive Level, similar to LFL.	VESDA Sensepoint XCL can monitor a range of combustible gases.
LTEL (Long Term Exposure Limit)	The concentration above which health could be impaired if exposed to for 8 hours. Measured in parts per million (ppm).	VESDA Sensepoint XCL is UL 2075 approved (single upstream hole).
mg/m3 (milligrams per cubic meter)	An alternative unit of measurement for toxic gases.	VESDA Sensepoint XCL uses the more common units of ppm, % LEL, % v/v.
Modbus	A serial data protocol used to interface detectors to a higher level 3rd party system.	VESDA Sensepoint XCL can provide Modbus output (dependent on version).
NIOSH	The US National Institute for Occupational Safety and Health who publish chemical substance hazard data.	VESDA Sensepoint XCL takes reference from NIOSH published data to set alarm thresholds.
OEL (Occupational Exposure Limit)	The 8-hour OEL is the time-weighted average concentration for a normal 8 hour day or 40 hour working week to which most workers may be repeatedly exposed, day after day, without adverse effect.	VESDA Sensepoint XCL alarm thresholds takes reference from NIOSH publications.
OSHA	The US Occupational Safety and Health Administration, part of the US Department of Labour.	VESDA Sensepoint XCL recognizes OSHA guidelines.
Perimeter Monitoring	Monitoring the outer perimeter of a plant or storage area as opposed to monitoring specific points or locations.	VESDA Sensepoint XCL is designed for indoor applications and best suited to monitoring smaller geographical areas or specific points or locations.
Pellistor	Another name for a catalytic sensing element.	VESDA Sensepoint XCL uses this principle for detecting flammable gases.
Point detection	A term used to describe a fixed-point gas detector.	VESDA Sensepoint XCL offers multi-point (multi-hole) sampling.
Potentially explosive atmospheres	Some times referred to as hazardous areas. A classification of an area within a plant, where the potential risk of an explosion has been assessed to be of significance. e.g. Class 1 Div1 / Div 2; Zone 0,1, or 2.	Equipment used within these areas require special approvals. VESDA Sensepoint XCL does not have these approvals.
ppm	Parts per million. A unit of measure used for toxic gases.	VESDA Sensepoint XCL measures toxic gases in ppm.
ppb	Parts per billion. A unit of measure used for toxic gases by more sensitive / analytical gas detection equipment.	VESDA Sensepoint XCL is not targeted for use in applications where ppb levels need to be monitored.
Relative Density	The relative density of a gas compared to air. Air has a RD = 1. Gases with a RD <1 are lighter than air. Gases with a RD >1 are heavier than air.	Used to determine location of sampling holes. Consideration must also be given to environmental conditions and mechanical ventilation effects.
RH	Relative Humidity.	VESDA Sensepoint XCL is designed to operate in a relative humidity of 0-99% RH non condensing.
STEL	The concentration above which health could be impaired when exposed to for 15 minutes. Measured in parts per million (ppm) Values can vary between geographical regions.	VESDA Sensepoint XCL is UL 2075 approved (single upstream hole).
TWA	Time-Weighted Average. A value of concentration over time. See STEL & LTEL.	VESDA Sensepoint XCL is UL 2075 approved (single upstream hole).
UEL	Upper Explosive Limit, similar to UFL.	It is recommended to set the VESDA Sensepoint XCL to detect concentrations less than 50% LEL.
UFL	Upper Flammable Limit. The maximum concentration at which an explosive gas / air mixture will generate an explosion if ignited. Measured in % by volume, values can differ between geographical regions.	It is recommended to set the VESDA Sensepoint XCL to detect concentrations less than 50% LEL.
UL	Underwriters Laboratories, A US based product test and approval / certification authority.	VESDA Sensepoint XCL is UL2075 (CO, CH ₄) approved.
% v/v	% by volume. Another unit of measure for a gas concentration.	VESDA Sensepoint XCL uses this unit of measure when detecting oxygen deficiency and Carbon Dioxide.
% VOL	Another way of representing % v/v.	See % v/v above.
Zone 0, 1 or 2 areas	The classification of an area based on the likelihood of an explosive risk. This system is predominantly used in Europe and parts of the Middle East and Far East. See potentially explosive atmospheres.	Equipment used within these areas require special approvals. VESDA Sensepoint XCL does not have these approvals.