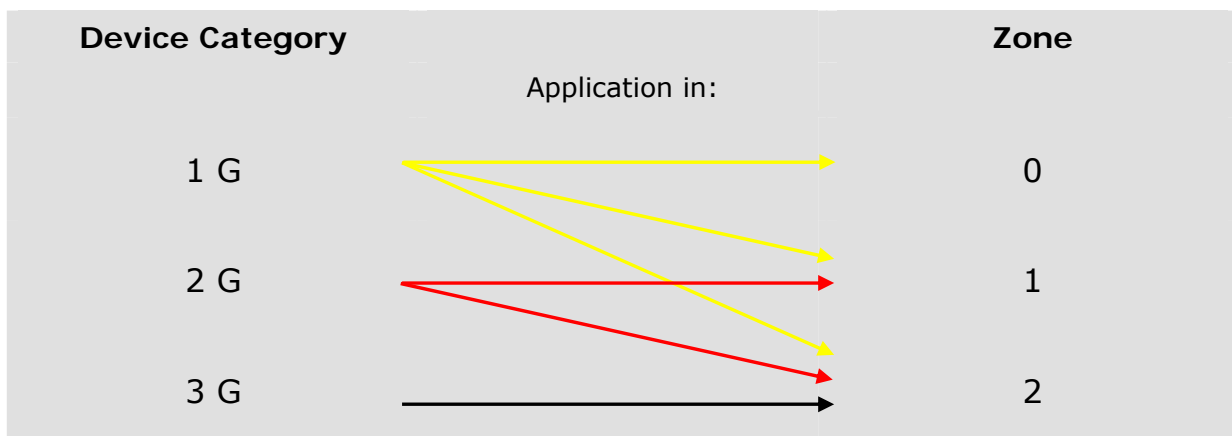


ATEX for Gas Detection Systems – Easy to understand!

Gas detection systems are very often used in hazardous areas and are subject to regulations applicable to such areas. Middle of the year 2003 all these individual regulations have been fixed for Europe under Directive 94/9/EU - better known as ATEX.

The user classifies first all hazardous areas into Zone 0, 1 or 2 by means of a risk analysis. The grade of hazard decreases from Zone 0 to Zone 2. You could use detection systems within these zones which correspond to the minimum requirements of the ATEX. The different requirements of the Zones are reflected in corresponding Device Categories (see Picture 1).



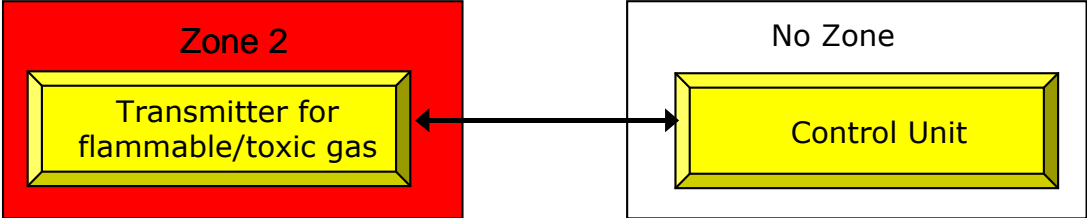
Picture 1: admissible combination of Device Categories and Zones (gases only).

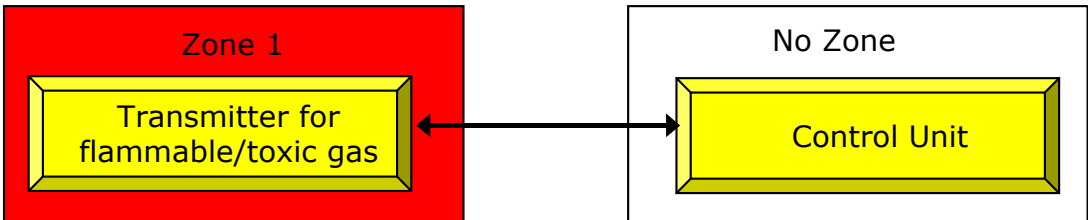
In most of the cases the requirements refer to the so-called ignition protection that means measures to prevent the device from causing an explosion.

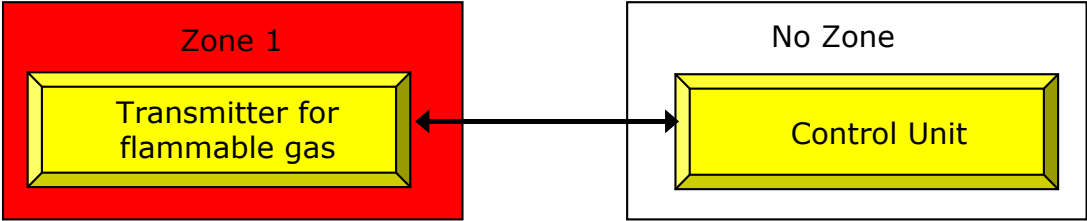
The safe measuring function may complete the requirements of a gas detection system for flammable gases. You have to keep in mind that in this case also the control unit of the gas detection system is subject to the ATEX regulations although it is not installed in hazardous areas itself. That has to be taken into consideration every time you integrate the measuring function into your safety concept.

The labelling on the gas detection system as well as the manufacturer's EC Declaration of Conformity stating the Directive 94/9/EU and the corresponding standards give information on whether the system is suitable for installation in hazardous areas. The ignition protection refers to the standards EN 50014 (and following) and the safe measuring function refers to EN 50054 (and following) and EN 61779. For detection systems of Categories 1 and 2 an EU-Type examination and production monitoring by notified bodies such as for example PTB, BAM or EXAM are mandatory. For detection systems of Category 3 a manufacturer's declaration is sufficient.

The following examples cover the main applications. In case of any question or problem please do not hesitate to contact us. We are glad to assist you.

Your requirements:	<ul style="list-style-type: none"> - Transmitter in Zone 2 - Control unit in non-hazardous area - Warning of flammable and toxic gases - no measuring function for explosion protection
	
Transmitter	Control unit
ATEX requirements: ignition protection min. Category 3 (EN 50020)	ATEX requirements: none
possible ATEX designation: - CE II 3G, EEx nA IIC T6	possible ATEX designation: none
<i>ExTox</i> offers: - Sens, Sens-D (measuring principle electro-chemical cell only) - ExSens, ExSens-D	<i>ExTox</i> offers: all control units could be combined

Your requirements:	<ul style="list-style-type: none"> - Transmitter in Zone 1 - Control unit in non-hazardous area - Warning of flammable or toxic gases - no measuring function for explosion protection
	
Transmitter	Control Unit
ATEX requirements: ignition protection min. Category 2	ATEX requirements: none
Possible ATEX designation: - CE ₀₀₀₀ II 2G, EEx d IIC T6 - CE-Marking acc. to standards EN 50014 and following required	possible ATEX designation: none
<i>ExTox</i> offers: - ExSens, ExSens-D	<i>ExTox</i> offers: All control units could be combined

Your requirements:	<ul style="list-style-type: none"> - Transmitter in Zone 1 - Control Unit in non-hazardous area - Warning of flammable gases - measuring function for explosion protection
	
Transmitter	Control Unit
ATEX requirements: <ul style="list-style-type: none"> - ignition protection min. Category 2 - safe measuring function 	ATEX requirements: <ul style="list-style-type: none"> - safe measuring function
possible ATEX designation: <ul style="list-style-type: none"> - CE_{0000} II 2G, EEx d IIC T6 - EC Marking acc. to EN 50014 following and EN 50054 following / EN 61779 required 	possible ATEX designation: <ul style="list-style-type: none"> - CE_{0000} II 2G - EC Marking acc. to EN 50054 following / EN 61779 required
ExTox offers: <ul style="list-style-type: none"> - ExSens-D BG-WT - ExSens BG-WT 	ExTox offers: <p>All control units could be combined</p>