GfG Instrumentation

Relative Response of the GfG G450-G460 Combustible Gas Sensor

The Combustible Gas Sensor in the GfG G450 and G460 Monitors will respond to a wide variety of combustible gases and vapors. The following table shows relative response (K-factor) of commonly encountered substances. The following table is not complete, other gases and vapors not listed on this table will respond to the sensor. The values shown are typical, actual relative response values may vary between individual sensors. The values listed below may fluctuate over operational life of the sensor and in different environmental conditions. Poisoning of the sensor may also alter the relative sensitivities for certain gases and vapors. The data below shows the displayed response to 50% LEL of the targeted chemical on a sensor calibrated to Methane, Propane and Pentane. Example: A concentration of 50% LEL of Acetaldehyde will produce a response displayed as 30% LEL on a sensor calibrated to Methane.

			Response to 50% LEL of target substance		
			Methane	Propane	Pentane
Chemical	**CAS No.**	**K-factor**	**Calibration**	**Calibration**	**Calibration**
Acetaldehyde	75-07-0	0.601	30%	54%	66%
Acetic Acid	64-19-7	0.543	27%	49%	59%
Acetic Anhydride	108-24-7	0.460	23%	42%	50%
Acetone	67-64-1	0.516	26%	47%	56%
Acetylene	74-86-2	0.568	28%	51%	62%
Ammonia	7664-41-7	1.265	63%	115%	138%
Aniline	62-53-3	0.394	20%	36%	43%
Benzene	71-43-2	0.407	20%	37%	44%
1, 3-Butadiene	106-99-0	0.558	28%	51%	61%
n-Butane	106-97-8	0.585	29%	53%	64%
n-Butylene	106-98-9	0.454	23%	41%	50%
n-Butyl Alcohol	71-36-3	0.343	17%	31%	37%
tert-Butyl Alcohol	75-65-0	0.742	37%	67%	81%
Carbon Disulfide	75-15-0	0.177	9%	16%	19%
Carbon Monoxide	630-08-0	0.754	38%	68%	82%
Carbonyl sulfide	463-58-1	0.934	47%	85%	102%
Cyanogen	460-19-5	0.892	45%	81%	97%
Cyclohexane	110-82-7	0.411	21%	37%	45%
Cyclopropane	75-19-4	0.622	31%	56%	68%
n-Decane	124-18-5	0.328	16%	30%	36%
Diethylamine	109-89-7	0.487	24%	44%	53%
Dimethyl Ether	115-10-6	0.625	31%	57%	68%
Dimethylamine	124-40-3	0.578	29%	52%	63%
2,2-Dimethylpropane	463-82-1	0.397	20%	36%	43%
Dimethylsulfide	75-18-3	0.434	22%	39%	47%
Dioxane	123-91-1	0.446	22%	40%	49%
Ethane	74-84-0	0.677	34%	61%	74%
Ethyl Acetate	141-78-6	0.512	26%	46%	56%
Ethyl Alcohol	64-17-5	0.728	36%	66%	79%
Ethyl Benzene	100-41-4	0.356	18%	32%	39%
Ethyl Ether	60-29-7	0.462	23%	42%	50%

			Response to 50% LEL of target substance		
			Methane	Propane	Pentane
Chemical	CAS No.	K-factor	Calibration	Calibration	Calibration
Ethyl Formate	109-94-4	0.442	22%	40%	48%
Ethylamine	75-04-7	0.526	26%	48%	57%
Ethylene	74-85-1	0.706	35%	64%	77%
Ethylene Oxide	75-21-8	0.517	26%	47%	56%
Ethyl Mercaptan	75-08-1	0.561	28%	51%	61%
n-Heptane	142-82-5	0.386	19%	35%	42%
n-Hexane	110-54-3	0.368	18%	33%	40%
Hydrazine	302-01-2	0.450	23%	41%	49%
Hydrogen	1333-74-0	0.766	38%	69%	84%
Hydrogen Cyanide	74-90-8	0.477	24%	43%	52%
Hydrogen Sulfide	`7783-06-4	0.407	20%	37%	44%
Isobutane	75-28-5	0.516	26%	47%	56%
Isobutyl Alcohol	78-83-1	0.529	26%	48%	58%
Isopentane	78-78-4	0.463	23%	42%	51%
Methane	74-82-8	1.000	50%	91%	109%
Methyl Acetate	79-20-9	0.496	25%	45%	54%
Methyl Alcohol	67-56-1	0.859	43%	78%	94%
Methyl Ethyl Ketone	78-93-3	0.412	21%	37%	45%
Methyl Formate	107-31-3	0.670	34%	61%	73%
Methyl Mercaptan	74-93-1	0.606	30%	55%	66%
Methyl n-propylketone		0.405	20%	37%	44%
Methylamine	74-89-5	0.772	39%	70%	84%
Methylcyclohexane	108-87-2	0.441	22%	40%	48%
Nitromethane	75-52-5	0.579	29%	52%	63%
Nonane	111-84-2	0.314	16%	28%	34%
Pentane	109-66-0	0.458	23%	41%	50%
Propane	74-98-6	0.552	28%	50%	60%
n-Propyl Alcohol	71-23-8	0.470	24%	43%	51%
Propylene	115-07-1	0.515	26%	47%	56%
Propylene Oxide	75-56-9	0.475	24%	43%	52%
Octane	111-65-9	0.374	19%	34%	41%
Toluene	108-88-3	0.404	20%	37%	44%
Triethylamine	121-44-8	0.398	20%	36%	43%
Trimethylamine	75-50-3	0.485	24%	44%	53%
m-Xylene	108-38-3	0.391	20%	35%	43%
o-Xylene	95-47-6	0.358	18%	32%	39%
p-Xylene	106-42-3	0.391	20%	35%	43%