CORRECTION FACTORS AND RELATIVE SENSITIVITY TO METHANE

FOR CATALYTIC BEAD SENSORS

Gas/Vapor	Chemical formula	100% LEL (%/VOL)	Relative sensitivity (Nemoto)	CF (Nemoto)
Acetic acid	CH3COOH	5.4	7	14.286
Acetone	(CH3)2CO	2.6	26	3.846
Ammonia	NH3	15	60	1.667
Butyl Acetate	C4H9COOH	1.2	18	5.556
Carbon monoxide	CO	12.5	40	2.500
Cyclo-hexane	C6H12	1.3	55	1.818
Cyclo-pentane	C5H10	1.4	59	1.695
Ethanol	C2H5OH	3.3	38	2.632
Ethyl acetate	C2H5COOH	2.2	31	3.226
Ethylene	C2H4	2.7	70	1.429
Hydrogen	H2	4	95	1.053
Iso-butane	C4H10	1.8	55	1.818
iso-octane	C8H18	1	40	2.500
Iso-propanol (Isopropyl Alcohol)	CH3-C2H4COOH	2.2	33	3.030
Methanol	CH3OH	6.7	67	1.493
Methyl tert-butyl ether(MTBE	C5H12O	1.6	59	1.695
N-butane	C4H10	1.8	51	1.961
N-heptane	C7H16	1.05	48	2.083
N-hexane	C6H14	1.2	45	2.222
n-octane	CH3(CH2)6CH3	0.8	35	2.857
n-pentane	CH3C(CH3)C2H6	1.4	56	1.785714286
N-pentane	C5H12	1.4	60	1.667
Propane	C3H8	2.1	55	1.818
Propylene	CH3-CH=CH2	2.4	60	1.667
Styrene	C6H5CH=CH2	1.1	15	6.667
Toluene	C6H5CH3	1.2	20	5.000
Xylene	C6H4(CH3)2	1.1	20	5.000
Vinyl Chloride Monomer	C2H3Cl	3.6		1.850

Methane	CH4	5	100	1.000

For example: To calibrate your cat bead gas detector for Methanol using Methane 50% LEL as the span gas, you should adjust the span value of the detector to 50*1.493 = 75% LEL for Methanol