

DrägerSensor[®] CAT Ex2

P/N 8316109

Gases qualified to measure:	<u>Name</u>	<u>Display Symbol</u>
	Methane, CH ₄	EX%VOL
	General Hydrocarbons	EX%L EL
Compatible Instruments:	Pac Ex 2	
Measuring Ranges:	0 to 100 % LEL 0 to 5.0 % CH ₄ Vol. 0 to 100 % CH ₄ by Vol. (display symbol flashes on PacEx2 when this mode is active)	
Response Time:	90% response to exposed concentration in less than 15 seconds at 20 °C 50% response to exposed concentration in less than 8 seconds at 20 °C 20% response to exposed concentration in less than 6.5 seconds at 20 °C	
Accuracy:	+/- 3% of measured value or better 0 to 50 % LEL +/- 5% of measured value or better 50 to 100 % LEL +/- 5% by Vol. or better 0 to 50 % by Vol. +/- 10% of measured value or better 50 to 100 % by Vol.	
Display Resolution:	1 % LEL for the measuring range of 0 to 100 % LEL 0.1 % by vol. for the measuring range of 0 to 5 % vol. CH ₄ 1 % by vol. for the measuring range of 5 to 100 % by vol. CH ₄	
Environmental Conditions:	Temperature: -4 to 131 °F (-20 to 55 °C), continuous operation Humidity: 10 to 95 %RH, continuous operation Pressure: 20.7 to 38.4 inches Hg (700 to 1300 hPa)	
Cross-Sensitivities:	Varies with calibration gas – contact Draeger for details	
Calibration Frequency:	Required: 3 months Recommended: 1 months	
Calibration Gas:	Required: Match to specific application or contact Draeger for information Concentration: 40-100% of selected range	
Compatible Filters:	External Dust/Mist Filter: P/N 4530046	
Warranty Period:	1 Year	

CatEx 2 Sensor %LEL Display Adjustment Factors

Applies to a CatEx 2 Sensor Installed in a Pac Ex 2



(1) If you have calibrated the CatEx 2 Sensor to %LEL methane, %LEL propane or %LEL pentane but are reading any of the substances listed below, you can "adjust" your reading to obtain an indication of that substance.

(2) **Multiply** your reading (the value highlighted in red) in the instrument display by the corresponding display adjustment factor for a methane, propane or pentane calibration given in the table below.

(3) Use the given calibration values to set the instrument's calibration and the display will show the target gas value so no correction needs to be performed by the user.



Note: Maximum calibration gas value for the Pac Ex 2 is 99% LEL

Chemical Name	Vol. %=100%LEL	(2) Methane Calibration Display Adj Factor	(3) Using 50%/LEL Methane, set calibration value to:	(3) Using 25%/LEL Methane, set calibration value to:	(2) Propane Calibration Display Adj Factor	(3) Using 50%/LEL Propane, set calibration value to:	(3) Using 35%/LEL Propane, set calibration value to:	(2) Pentane Calibration Display Adj Factor	(3) Using 50%/LEL Pentane, set calibration value to:	(3) Using 30%/LEL Pentane, set calibration value to:
Acetic Acid	4.00 % Vol.	3.41	171 % LEL	85 % LEL	1.81	91 % LEL	63 % LEL	1.54	77 % LEL	46 % LEL
Acetone	2.50 % Vol.	2.21	110 % LEL	55 % LEL	1.17	59 % LEL	41 % LEL	1.00	50 % LEL	30 % LEL
Acetylene	2.50 % Vol.	2.78	139 % LEL	69 % LEL	1.47	74 % LEL	52 % LEL	1.26	63 % LEL	38 % LEL
Ammonia	15.00 % Vol.	0.79	40 % LEL	20 % LEL	0.42	21 % LEL	15 % LEL	0.36	18 % LEL	11 % LEL
Benzene	1.20 % Vol.	2.51	126 % LEL	63 % LEL	1.33	67 % LEL	47 % LEL	1.14	57 % LEL	34 % LEL
Butadiene-1,3	1.10 % Vol.	2.55	127 % LEL	64 % LEL	1.35	68 % LEL	47 % LEL	1.15	58 % LEL	35 % LEL
Butane	1.90 % Vol.	2.04	102 % LEL	51 % LEL	1.08	54 % LEL	38 % LEL	0.92	46 % LEL	28 % LEL
Carbon Monoxide	12.50 % Vol.	1.25	62 % LEL	31 % LEL	0.66	33 % LEL	23 % LEL	0.56	28 % LEL	17 % LEL
Cyclohexane	1.30 % Vol.	2.49	125 % LEL	62 % LEL	1.32	66 % LEL	46 % LEL	1.13	56 % LEL	34 % LEL
Diethylether	1.90 % Vol.	2.29	114 % LEL	57 % LEL	1.21	61 % LEL	42 % LEL	1.03	52 % LEL	31 % LEL
Ethane	3.00 % Vol.	1.39	70 % LEL	35 % LEL	0.74	37 % LEL	26 % LEL	0.63	31 % LEL	19 % LEL
Ethanol	3.30 % Vol.	1.69	85 % LEL	42 % LEL	0.90	45 % LEL	31 % LEL	0.77	38 % LEL	23 % LEL
Ethylacetate	1.70 % Vol.	2.56	128 % LEL	64 % LEL	1.36	68 % LEL	48 % LEL	1.16	58 % LEL	35 % LEL
Ethylene	2.70 % Vol.	1.54	77 % LEL	38 % LEL	0.82	41 % LEL	29 % LEL	0.70	35 % LEL	21 % LEL
Heptane	1.05 % Vol.	2.69	134 % LEL	67 % LEL	1.43	71 % LEL	50 % LEL	1.22	61 % LEL	37 % LEL
Hexane	1.10 % Vol.	2.35	117 % LEL	59 % LEL	1.25	62 % LEL	44 % LEL	1.06	53 % LEL	32 % LEL
Hydrogen	4.00 % Vol.	1.24	62 % LEL	31 % LEL	0.66	33 % LEL	23 % LEL	0.56	28 % LEL	17 % LEL
Methane	5.00 % Vol.	1.00	50 % LEL	25 % LEL	0.53	27 % LEL	19 % LEL	0.45	23 % LEL	14 % LEL
Methanol	6.00 % Vol.	1.46	73 % LEL	37 % LEL	0.78	39 % LEL	27 % LEL	0.66	33 % LEL	20 % LEL
Methyl Ethyl Ketone	1.40 % Vol.	2.63	132 % LEL	66 % LEL	1.40	70 % LEL	49 % LEL	1.19	60 % LEL	36 % LEL
n-Butanol	1.40 % Vol.	3.04	152 % LEL	76 % LEL	1.62	81 % LEL	57 % LEL	1.38	69 % LEL	41 % LEL
Nonane/Jet Fuel	0.80 % Vol.	4.00	200 % LEL	100 % LEL	2.13	106 % LEL	74 % LEL	1.81	91 % LEL	54 % LEL
Octane	1.00 % Vol.	2.85	143 % LEL	71 % LEL	1.52	76 % LEL	53 % LEL	1.29	65 % LEL	39 % LEL
Pentane	1.40 % Vol.	2.21	111 % LEL	55 % LEL	1.17	59 % LEL	41 % LEL	1.00	50 % LEL	30 % LEL
Propane	2.10 % Vol.	1.88	94 % LEL	47 % LEL	1.00	50 % LEL	35 % LEL	0.85	43 % LEL	26 % LEL
Propanol	2.00 % Vol.	1.97	98 % LEL	49 % LEL	1.04	52 % LEL	37 % LEL	0.89	45 % LEL	27 % LEL
Propylene	2.00 % Vol.	1.84	92 % LEL	46 % LEL	0.98	49 % LEL	34 % LEL	0.83	42 % LEL	25 % LEL
Propylene Oxide	2.30 % Vol.	2.59	130 % LEL	65 % LEL	1.38	69 % LEL	48 % LEL	1.17	59 % LEL	35 % LEL
Toluene	1.10 % Vol.	2.47	124 % LEL	62 % LEL	1.31	66 % LEL	46 % LEL	1.12	56 % LEL	34 % LEL
p-Xylene	1.10 % Vol.	2.77	139 % LEL	69 % LEL	1.47	74 % LEL	52 % LEL	1.25	63 % LEL	38 % LEL
m-Xylene	1.10 % Vol.	2.69	135 % LEL	67 % LEL	1.43	72 % LEL	50 % LEL	1.22	61 % LEL	37 % LEL
o-Xylene	0.90 % Vol.	3.00	150 % LEL	75 % LEL	1.59	80 % LEL	56 % LEL	1.36	68 % LEL	41 % LEL

Please Note:

Heat of reaction sensor dominates even over 100% LEL, e.g., optimal burn ratio for CH4 in air is ~9.5 Vol. %

Reported Values Based on Methane Calibration and Average Cross Sensitivities.

For accurate work only direct calibration is recommended.

The above factors have an uncertainty of up to ±25 % LEL.