DrägerSensor PID HC neo

Order no. 68 00 417

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	UV lamp
Dräger X-am 5800	no	yes	1 year [1)]	2 years	10.6 eV (Krypton)

MARKET SEGMENTS

Chemical industry, painters, storage and use of fuels (e.g. gas stations)

TECHNICAL SPECIFICATIONS

Detection limit (LOD)*	0.3 ppm isobutylene / 0.15 ppm benzene	
Limit of Quantification (LOQ)	4 ppm isobutylene / 2 ppm benzene	
Resolution* (exemplary for isobutylene)	0-20 ppm	100 ppb
	> 20-50 ppm	200 ppb
	> 50-100 ppm	500 ppb
	> 100-200 ppm	1 ppm
	> 200-500 ppm	2 ppm
	> 500-1,000 ppm	5 ppm
	> 1,000-2,000 ppm	10 ppm
Measurement range	0 bis 2,000 ppm isobutylene	
Ambient conditions		
Temperature:	(-20 to 60) °C (-4 to 140) °F	
Humidity:	(10 to 95) % RH	
Pressure:	(700 to 1,300) hPa	
Warm-up time	2 minutes ready for measurement (warm-up 1)	
	2 minutes ready for calibration (warm-up 2) – when stored in the charging cradle	

TYPICAL MEASURING PROPERTIES FOR THE MEASUREMENT RANGE 0 TO 2,000 PPM WHEN CALIBRATED WITH ISOBUTYLENE IN AIR:

Response time	Diffusion mode (t_{20})	≤ 5 seconds
	Diffusion mode (t_{90})	≤ 10 seconds
	Pump mode (t_{20})	≤ 5 seconds
	Pump mode (t_{90})	≤ 10 seconds
Precision		
at 100 ppm isobutylene:	≤ ± 2% of measured value; at zero point ≤ ±0.3 ppm isobutylene	
Linearity error	≤ ± 5 % of measured value; A calibration in the range of the expected concentration will give a higher accuracy at the measuring point. The further the concentration to be monitored is from the calibration point, the greater the deviations.	
Influence of temperature (-20 to 50 °C)		
Zero point:	≤ ± 0,02 ppm/K	
Sensitivity:	≤ ± 0,2 ppm/K	
Influence of humidity, at 20 °C/68 °F (0 to 90% RH, non-condensing)		
Zero point:	≤ ± 0.003 ppm isobutylene/% RH	
Sensitivity:	≤ ± 0.07 ppm isobutylene/% RH	
Influence of pressure	compensated	
Long-term drift		
Zero point:	< 1 ppm / year Contamination of the front lamp window can have a negative effect on the measured value. Regular cleaning of the lamp window using cleaning set 8319111 is recommended.	
Test gas:	approx. 100 ppm i-C_4H_8 (isobutylene) For maximum precision, zero adjustment should be performed repeatedly. A surrogate gas adjustment can lead to an additional measurement error of up to 30 %.	

* Depends on the response factor of the measured gas

[1)] At a run time of max. 2,500 hours

[2)] Sudden temperature and humidity changes influence the measurement signal.

SPECIAL CHARACTERISTICS

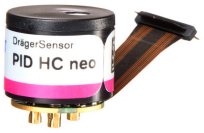
A large number of volatile organic compounds (VOCs) can be detected with the PID. More than 80 of the most commonly used VOCs in industry are already stored in the sensor data set. On customer request, a further gas can be added to the sensor data set. During the start sequence, the X-am 5800 checks whether the PID sensor is working properly. If this is not the case, a corresponding message appears on the device display.

GASES STORED IN THE SENSOR DATASET

Gas/vapor	CAS no.	Code	Measurement range
Acetaldehyde	75-07-0	Aald	0 - 10000 ppm
Acetone	67-64-1	Acet	0 - 2000 ppm
Acetophenone	98-86-2	AcPh	0 - 2000 ppm
Acrolein	107-02-8	Acro	0 - 8000 ppm
Allylalcohol	107-18-6	AlOH	0 - 4500 ppm
Allyl chloride	107-05-1	AlCl	0 - 8000 ppm
alpha-Pinen	80-56-8	aPIN	0 - 800 ppm
Ammonia	7664-41-7	NH3	0 - 10000 ppm
Benzene	71-43-2	C6H6	0 - 1000 ppm
1-Brompropane	106-94-5	BrPr	0 - 3000 ppm
1,3-Butadiene	106-99-0	BTD1	0 - 1500 ppm
1-Butanol	71-36-3	BuOH	0 - 9500 ppm
2-Butanol	78-92-2	2BOH	0 - 6500 ppm
1-Butene	106-98-9	Bute	0 - 2000 ppm
n-Butyl acetate	123-86-4	Bace	0 - 5500 ppm
Butyraldehyd	123-72-8	Buty	0 - 4000 ppm
Carbon disulfide	75-15-0	CS2	0 - 2000 ppm
Chlorobenzene	108-90-7	ClBz	0 - 1000 ppm
Cumene	98-82-8	Cume	0 - 1500 ppm
Cyclohexane	110-82-7	Chex	0 - 2500 ppm
Cyclohexanone	108-94-1	CyHo	0 - 2000 ppm
1,2-Dichlorobenzene (ortho-)	95-50-1	BeDi	0 - 1500 ppm
trans-1,2-Dichloroethene	156-60-5	DiCl	0 - 900 ppm
Diesel fuel	68476-34-6	Desl	0 - 2000 ppm
Dimethyl ether	115-10-6	DME	0 - 5000 ppm
N,N-Dimethylformamide	68-12-2	DMF	0 - 2000 ppm
1,4-Dioxane	123-91-1	Diox	0 - 2500 ppm
Ethanol	64-17-5	EtOH	0 - 10000 ppm
Ethyl acetate	141-78-6	Etat	0 - 8000 ppm
Ethylbenzene	100-41-4	EtBz	0 - 1000 ppm
Ethyl ether	60-29-7	DETH	0 - 2000 ppm
Ethylene	74-85-1	C2H4	0 - 10000 ppm
Ethylene oxide	75-21-8	EO	0 - 10000 ppm
Ethyl mercaptan	75-08-1	EtM	0 - 5000 ppm
Ethyl tert-butyl ether	637-92-3	ETBE	0 - 2000 ppm
4-Ethyltoluene	622-96-8	EtTo	0 - 1000 ppm
Furfural	98-01-1	Furf	0 - 3000 ppm
Furan	110-00-9	Fura	0 - 2000 ppm
Gasoline	8006-61-9	Gaso	0 - 2000 ppm
n-Heptane	142-82-5	Hept	0 - 6500 ppm
1,1,1,3,3,3-Hexamethyldisilazane	999-97-3	HMDS	0 - 500 ppm
n-Hexane	110-54-3	Hexa	0 - 8000 ppm
1-Hexene	592-41-6	Hex1	0 - 2000 ppm
Hydrogen sulfide	7783-06-4	H2S	0 - 8000 ppm
Isobutanol	78-83-1	iBto	0 - 10000 ppm
Isobutyl acetate	110-19-0	iBAc	0 - 6500 ppm
Isobutylene	115-11-7	iBut	0 - 2000 ppm
Iso-octane	540-84-1	iOct	0 - 2000 ppm
Isoprene	78-79-5	iPre	0 - 1500 ppm

Isopropanol (IPA)	67-63-0	PrOH	0 - 10000 ppm
Isopropyl acetate	108-21-4	iPAc	0 - 6000 ppm
Isopropyl ether	108-20-3	iPEt	0 - 2000 ppm
Jet fuel	8008-20-6	JetF	0 - 2000 ppm
2-Methoxyethanol	109-86-4	EGME	0 - 6500 ppm
Methyl acetate	79-20-9	MeAc	0 - 10000 ppm
Methyl bromide	74-83-9	MeBr	0 - 4000 ppm
2-Methylbutane (Isopentane)	78-78-4	iPen	0 - 10000 ppm
Methylcyclohexane	108-87-2	Mche	0 - 2000 ppm
Methyl ethyl ketone	78-93-3	MEK	0 - 2000 ppm
Methyl isobutyl carbinol	108-11-2	MIBC	0 - 4000 ppm
Methyl isobutyl ketone	108-10-1	MiBK	0 - 2000 ppm
Methyl mercaptane	74-93-1	MeM	0 - 1500 ppm
Methyl tert-butyl ether	1634-04-4	MTBE	0 - 2000 ppm
n-Nonane	111-84-2	Nona	0 - 3000 ppm
n-Octane	111-65-9	Octa	0 - 4000 ppm
n-Pentane	109-66-0	Pent	0 - 10000 ppm
1-Pentanol	71-41-0	PeOH	0 - 9500 ppm
Phosphine	7803-51-2	PH3	0 - 8000 ppm
n-Propanol	71-23-8	nPOH	0 - 10000 ppm
Propyl acetate	109-60-4	PrAc	0 - 9000 ppm
Propylene	115-07-1	C3H6	0 - 2500 ppm
Propylen oxide	75-56-9	PrO	0 - 10000 ppm
Styrene	100-42-5	Styr	0 - 800 ppm
Tetrachloroethylene	127-18-4	PCE	0 - 1500 ppm
Tetrahydrofuran	109-99-9	THF	0 - 4000 ppm
Thiophene	110-02-1	ThPh	0 - 700 ppm
Toluene	108-88-3	Tolu	0 - 1000 ppm
Trichloroethylene	79-01-6	TCE	0 - 1000 ppm
1,2,4-Trimethylbenzene (Pseudocumene)	95-63-6	PsDo	0 - 1000 ppm
1,3,5-Trimethylbenzene	108-67-8	Mesi	0 - 1000 ppm
Vinyl acetate	108-05-4	Vac	0 - 2500 ppm
Vinyl chloride	75-01-4	VC	0 - 4000 ppm
Vinylidene Chloride	75-35-4	DCE	0 - 2000 ppm
meta-Xylene	108-38-3	mXyl	0 - 800 ppm
ortho-Xylene	95-47-6	Xyol	0 - 1000 ppm
para-Xylene	106-42-3	pXyl	0 - 1000 ppm

For additional information on the gases stored in the sensor dataset see data sheet 9300316 at www.draeger.com at the Dräger X-am 8000 or the PID sensors (instructions for use).



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