

DrägerSensor® PID LC ppb

Order no. 68 13 500

| Used in | Plug & Play | Replaceable | Guaranty | Expected sensor life | UV lamp |
|------------------|-------------|-------------|----------------------|----------------------|---------|
| Dräger X-am 8000 | no | yes | 1 year ¹⁾ | 2 years | 10.6 eV |

MARKET SEGMENTS

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

TECHNICAL SPECIFICATIONS

| | | |
|-------------------------------------|---|--------|
| Detection limit:* | 0.03 ppm / benzene | |
| Resolution:* | 0-2 ppm | 10 ppb |
| (valid for isobutylene and benzene) | > 2-5 ppm | 20 ppb |
| | > 5-10 ppm | 50 ppb |
| Measurement range: | 0 to 10 ppm isobutylene/0 to 5 ppm benzene | |
| General technical specifications | | |
| Ambient conditions | | |
| Temperature: ²⁾ | (-20 to 60)°C (-4 to 140)°F | |
| Humidity: ²⁾ | (10 to 95)% RH | |
| Pressure: | (700 to 1,300) hPa | |
| Warm-up time: | 1 minute ready for measurement (warm-up 1) | |
| | 5 minutes ready for calibration (warm-up 2) | |

TYPICAL MEASURING PROPERTIES FOR THE MEASUREMENT RANGE 0 TO 10 PPM WHEN CALIBRATED WITH ISOBUTYLENE IN AIR:

| | |
|--|--|
| Response time: | Diffusion mode ≤ 5 seconds (t ₂₀) |
| | Diffusion mode ≤ 15 seconds (t ₉₀) |
| | Pump mode ≤ 5 seconds (t ₂₀) |
| | Pump mode ≤ 15 seconds (t ₉₀) |
| Precision | |
| at 5 ppm isobutylene: | ≤ ± 2% of measured value; at zero point ≤ ± 0.05 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. |
| Pressure effect | compensated |
| Effect of humidity, at 20 °C (68 °F) (0 to 90% RH, non-condensing) | |
| Zero point: | ≤ ± 0.005 ppm isobutylene/% RH |
| at 5 ppm isobutylene: | ≤ ± 0.02 ppm isobutylene/% RH |
| Test gas: | approx. 5 ppm i-C ₄ H ₈ (isobutylene) |

* 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. When sudden temperature and humidity changes are expected, it is recommended to use a humidity pre-tube (81 03 531) for the measurement.

SPECIAL CHARACTERISTICS

Apart from the detection of a variety of volatile organic compounds (VOC) this sensor is suitable for a benzene specific measurement in the ppb range. Using the prefilter benzene (81 03 511) tube concurrent hydrocarbons will be filtered.

GASES STORED IN THE MEMORY

| Gas/Vapor | CAS no. | Code | Measurement range |
|------------------------------|------------|------|-------------------|
| Acetaldehyde | 75-07-0 | Aald | ---1) |
| Acetone | 67-64-1 | Acet | 0 - 18 ppm |
| Acetophenone | 98-86-2 | AcPh | 0 - 15 ppm |
| Acrolein | 107-02-8 | Acro | ---1) |
| Allyl alcohol | 107-18-6 | AlOH | 0 - 35 ppm |
| Allyl chloride | 107-05-1 | AlCl | 0 - 80 ppm |
| alpha-Pinen | 80-56-8 | aPIN | 0 - 8 ppm |
| Ammonia | 7664-41-7 | NH3 | ---1) |
| Benzene | 71-43-2 | C6H6 | 0 - 8 ppm |
| 1-Bromopropane | 106-94-5 | BrPr | 0 - 30 ppm |
| 1,3-Butadiene | 106-99-0 | BDT1 | 0 - 10 ppm |
| 1-Butanol | 71-36-3 | BuOH | 0 - 80 ppm |
| 2-Butanol | 78-92-2 | 2BOH | 0 - 40 ppm |
| 1-Butene | 106-98-9 | Bute | 0 - 20 ppm |
| n-Butyl acetate | 123-86-4 | Bace | 0 - 40 ppm |
| Carbon disulfide | 75-15-0 | CS2 | 0 - 15 ppm |
| Chlorobenzene | 108-90-7 | ClBz | 0 - 12 ppm |
| Cumene | 98-82-8 | Cume | 0 - 12 ppm |
| Cyclohexane | 110-82-7 | Chex | 0 - 24 ppm |
| Cyclohexanone | 108-94-1 | CyHo | 0 - 15 ppm |
| 1,2-Dichlorobenzene (ortho-) | 95-50-1 | BeDi | 0 - 10 ppm |
| trans-1,2-Dichloroethylene | 156-60-5 | DiCl | 0 - 8 ppm |
| Diesel fuel | 68476-34-6 | Desl | 0 - 15 ppm |
| Dimethyl ether | 115-10-6 | DME | 0 - 45 ppm |
| N,N-Dimethylformamide | 68-12-2 | DMF | ---1) |
| 1,4-Dioxane | 123-91-1 | Diox | 0 - 25 ppm |
| Ethanol | 64-17-5 | EtOH | ---1) |
| Ethyl acetate | 141-78-6 | Etat | 0 - 75 ppm |
| Ethylbenzene | 100-41-4 | EtBz | 0 - 14 ppm |
| Ethylene | 74-85-1 | C2H4 | ---1) |
| Ethylene oxide | 75-21-8 | EO | ---1) |
| Ethyl ether | 60-29-7 | DETH | 0 - 20 ppm |
| Ethyl mercaptan | 75-08-1 | EtM | 0 - 35 ppm |
| Ethyl tert-butyl ether | 637-92-3 | ETBE | 0 - 16 ppm |
| 4-Ethyltoluene | 622-96-8 | EtTo | 0 - 8 ppm |
| Furfural | 98-01-1 | Furf | 0 - 20 ppm |
| Gasoline | 8006-61-9 | Gaso | 0 - 15 ppm |
| n-Heptane | 142-82-5 | Hept | 0 - 45 ppm |

GASES STORED IN THE MEMORY

| Gas/Vapor | CAS no. | Code | Measurement range |
|---------------------------------------|-----------|------|-------------------|
| 1,1,1,3,3,3-Hexamethyldisilazane | 999-97-3 | HMDS | 0 - 6 ppm |
| n-Hexane | 110-54-3 | Hexa | 0 - 70 ppm |
| 1-Hexene | 592-41-6 | HEX1 | 0 - 20 ppm |
| Hydrogen sulfide | 7783-06-4 | H2S | 0 - 60 ppm |
| Isobutanol | 78-83-1 | iBto | 0 - 65 ppm |
| Isobutyl acetate | 110-19-0 | iBAc | 0 - 45 ppm |
| Isobutylene | 115-11-7 | iBut | 0 - 15 ppm |
| Iso-octane | 540-84-1 | iOct | 0 - 20 ppm |
| Isoprene | 78-79-5 | iPre | 0 - 10 ppm |
| Isopropanol (IPA) | 67-63-0 | PrOH | ---1) |
| Isopropyl acetate | 108-21-4 | iPAc | 0 - 50 ppm |
| Isopropyl ether | 108-20-3 | iPEt | 0 - 20 ppm |
| Jet fuel | 8008-20-6 | JetF | 0 - 15 ppm |
| 2-Methoxyethanol | 109-86-4 | EGME | 0 - 50 ppm |
| Methyl acetate | 79-20-9 | MeAc | ---1) |
| Methyl bromide | 74-83-9 | MeBr | 0 - 32 ppm |
| 2-Methylbutane (Isopentane) | 78-78-4 | iPen | ---1) |
| Methylcyclohexane | 108-87-2 | Mche | 0 - 20 ppm |
| Methyl ethyl ketone | 78-93-3 | MEK | 0 - 16 ppm |
| Methyl isobutyl carbinol | 108-11-2 | MIBC | 0 - 25 ppm |
| Methyl isobutyl ketone | 108-10-1 | MiBK | 0 - 18 ppm |
| Methyl mercaptane | 74-93-1 | MeM | 0 - 10 ppm |
| Methyl tert-butyl ether | 1634-04-4 | MTBE | 0 - 16 ppm |
| n-Nonane | 111-84-2 | Nona | 0 - 32 ppm |
| n-Octane | 111-65-9 | Octa | 0 - 32 ppm |
| n-Pentane | 109-66-0 | Pent | ---1) |
| 1-Pentanol | 71-41-0 | PeOH | 0 - 65 ppm |
| Phosphine | 7803-51-2 | PH3 | 0 - 50 ppm |
| n-Propanol | 71-23-8 | nPOH | ---1) |
| Propyl acetate | 109-60-4 | PrAc | 0 - 65 ppm |
| Propylene | 115-07-1 | C3H6 | 0 - 19 ppm |
| Styrene | 100-42-5 | Styr | 0 - 12 ppm |
| Tetrachloroethylene | 127-18-4 | PCE | 0 - 15 ppm |
| Tetrahydrofuran | 109-99-9 | THF | 0 - 25 ppm |
| Thiophene | 110-02-1 | ThPh | 0 - 8 ppm |
| Toluene | 108-88-3 | Tolu | 0 - 15 ppm |
| Trichloroethylene | 79-01-6 | TCE | 0 - 14 ppm |
| 1,2,4-Trimethylbenzene (Pseudocumene) | 95-63-6 | PsDo | ---1) |
| 1,3,5-Trimethylbenzene | 108-67-8 | Mesi | 0 - 8 ppm |
| Vinyl acetate | 108-05-4 | Vac | 0 - 30 ppm |
| Vinyl chloride | 75-01-4 | VC | 0 - 32 ppm |
| Vinylidene Chloride | 75-35-4 | DCE | 0 - 12 ppm |
| meta-Xylene | 108-38-3 | mXyl | 0 - 10 ppm |
| ortho-Xylene | 95-47-6 | Xyol | 0 - 12 ppm |
| para-Xylene | 106-42-3 | pXyl | 0 - 8 ppm |

The standard gas is: Isobutylene

---1) The measuring capability of the sensor type is not sufficient for this substance.

The response factors of the library gases are predefined and cannot be changed. For gases not included in the library, use the designated user gases VOC, VOC₁ to VOC₉. These can be configured accordingly on a customer-specific basis.

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