DrägerSensor® XXS CO_2

Order no. 68 10 889

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 7000	no	yes	1 year	> 1.25 years	no
Dräger X-am 5000	no	yes	1 year	> 1.25 years	no
Dräger X-am 5000	no	yes	1 year	> 1.25 years	no

MARKET SEGMENTS

Waste disposal, Food and beverage (breweries), metal processing, petrochemical, fertilizer production, sewage, police, customs and rescue services, mining and tunneling, shipping and transport, power generation.

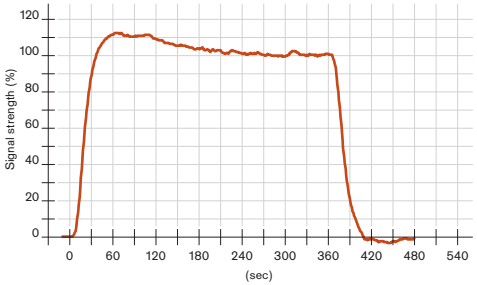
TECHNICAL SPECIFICATIONS

Detection limit:	0.3 Vol.-%
Resolution:	0.1 Vol.-%
Measurement range:	0 to 5 Vol.-% CO_2 (carbon dioxide)
Response time:	≤ 30 seconds (T_{50})
Measurement accuracy	
Sensitivity:	≤ ± 20% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 0.2 Vol.-%/year
Sensitivity:	≤ ± 15% of measured value/month
Warm-up time:	≤ 12 hours
Ambient conditions	
Temperature:	(–20 to 40)°C (–4 to 104)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,300) hPa
Influence of temperature	
Zero point:	≤ ± 0.01 Vol.-%/K
Sensitivity:	≤ ± 2% of measured value
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.1% of measured value/% RH
Test gas:	1 to 4 Vol.-% CO_2

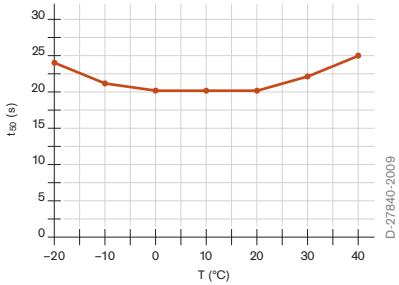
SPECIAL CHARACTERISTICS

This sensor is highly sensitive (see cross-sensitivity list) and offers an economical alternative to infrared sensors if you need to warn against CO_2 concentrations in the ambient air.

Sensor reaction to CO_2 at 20 °C/68 °F
Flow = 0.5 l/min, with 5000 ppm CO_2



Response time (t_{50}) vs. temperature
with 5000 ppm CO_2



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The values shown in the following table are standard and apply to new sensors. The values maybe fluctuate by ± 30%. The sensor may also be sensitive to additional gases (for more information, please contact Dräger). Gas mixtures may be displayed as the sum of all components. Gases with a negative cross sensitivity may displace an existing concentration of CO_2. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm CO_2
Ammonia	NH_3	50 ppm	No effect
Carbon monoxide	CO	1,000 ppm	No effect
Chlorine	Cl_2	10 ppm	No effect
Ethanol	C_2H_5OH	250 ppm	No effect
Ethine	C_2H_2	100 ppm	No effect
Hydrogen	H_2	1.6 Vol.-%	No effect
Hydrogen chloride	HCl	20 ppm	No effect
Hydrogen cyanide	HCN	60 ppm	No effect
Hydrogen sulfide	H_2S	20 ppm	No effect
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Nitrogen dioxide	NO_2	20 ppm	No effect
Nitrogen monoxide	NO	20 ppm	No effect
Methane	CH_4	0.9 Vol.-%	No effect
Ozone	O_3	1.5 ppm	No effect
Phosphine	PH_3	5 ppm	No effect
Sulfur dioxide	SO_2	20 ppm	No effect

(–) Indicates negative deviation